

NOT YET SCHEDULED FOR ORAL ARGUMENT**Appeal No. 17-7035****(Consolidated with Appeal No. 17-7039)**

United States Court of Appeals**FOR THE DISTRICT OF COLUMBIA CIRCUIT**

American Society for Testing and Materials; National Fire Protection
Association, Inc.; and American Society of Heating, Refrigerating,
and Air Conditioning Engineers, Inc.,

Appellees,

v.

Public.Resource.Org, Inc.,

Appellant.

Appeal from the United States District Court for the District of Columbia
Hon. Tanya S. Chutkan
1:13-cv-1215-TSC
1:14-cv-0857-TSC

**PUBLIC APPENDIX – MATERIAL UNDER SEAL
IN SEPARATE SUPPLEMENT
VOLUME 4 (JA1780-JA2332)**

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CERTIFICATE OF SERVICE

I, hereby certify that on January 31, 2018, I electronically filed the foregoing **Appendix** with the Clerk of the United States Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system. I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

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EXHIBIT 126



Standards Committee

Procedures for ASHRAE Standards Actions PASA

Originated: June 30, 1994
Latest Revision Approved by ASHRAE BOD: January 28, 2015
Latest Approval by ANSI: April 29, 2015

FOREWORD

The original edition of the *Procedures for ASHRAE Standards Actions* (PASA), dated June 30, 1994 superseded all previous documentation for communicating ASHRAE's procedures as a basis for continuation (re-accreditation) under the ANSI Organization Accreditation Method. PASA changes must be approved by the ASHRAE Board of Directors and ANSI.

ASHRAE publishes the following types of voluntary consensus standards:

ASHRAE Standard Method of Measurement or Test
ASHRAE Standard Design
ASHRAE Standard Practice
ASHRAE Standard Rating

Most ASHRAE Standards are of the Method of Measurement or Test type. ASHRAE Standard Design and Standard Practice documents receive the most use by consulting engineers and architects, requests for committee participation, public review comments, and adoption by code bodies. HVAC equipment manufacturers use all three types of ASHRAE Standards. The project committee voting memberships represent a balance of interest (at least User, Producer, and General) so that no one category has a majority. ASHRAE Standards are used by persons in all three-interest categories.

ASHRAE's Standard Project Committees may include persons who are not members of ASHRAE (e.g., physiologists, medical doctors, chemists, etc.).

The [Summary of changes table](#) has been moved to the end of the document.



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PROCEDURES FOR ASHRAE STANDARDS ACTIONS

1 INTRODUCTION

Founded in 1894, the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) is a technical society of more than 50,000 members, organized and operated for the exclusive purpose of advancing the arts and sciences of heating, refrigeration, air conditioning and ventilation, the allied arts and sciences, and related human factors for the benefit of the general public. ASHRAE sponsors a research program, develops standards, publishes technical data, and organizes meetings and educational activities for both its members and others professionally concerned with refrigeration processes and the design and maintenance of indoor environments. The Society also strives to promote increased public awareness of the requirements for healthful and comfortable indoor environments.

2 SCOPE

These Procedures direct ASHRAE's standards activities in the field of heating, refrigeration, air conditioning and ventilation, and the allied arts and sciences. These Procedures apply to activities related to the development of consensus for approval, revision, reaffirmation, withdrawal, and maintenance of ASHRAE Standards, and to relations with standards-related committees of other organizations.

ASHRAE leaves to trade associations the writing of rating standards unless a suitable rating standard will not otherwise be available.

3 DEFINITIONS, ABBREVIATIONS AND ACRONYMS, AND CLASSIFICATIONS

[Annex A](#) provides definitions, abbreviations and acronyms, and classifications of ASHRAE Standards.

4 APPROVAL OF PROPOSED STANDARDS

4.1 RESPONSIBILITY

The Standards Committee is responsible for formation of project committees and the development, preparation, interpretation, revision, reaffirmation, withdrawal – and submittal to the Board of Directors or its designee for approval – of ASHRAE Standards Actions. The Board of Directors or its designee will counsel and offer guidance to the Standards Committee on policy level standards.

Each member of the Standards Committee is appointed to one or more subcommittees by the chair. These subcommittees are responsible for:

- tracking the status of project committees,
- recommending ASHRAE appointments to standards-writing committees of other organizations, monitoring their activities, and maintaining ASHRAE participation in the canvass balloting activities of other standards-writing organizations, and
- ensuring the timely maintenance of existing standards in accordance with ASHRAE procedures; forming interpretations committees for standards when project committees do not exist; considering requests for development of joint sponsorship agreements; and acting in coordination with cognizant



ASHRAE Technical Committees, Task Groups or Technical Resource Groups (TC/TG/TRG) to recommend reaffirmation or withdrawal of standards.

Project Committees are appointed to develop and revise standards in accordance with approved written procedures. The project committees are responsible for the technical content of standards and addenda. The Standards Committee supervises the work of project committees to ensure that approved procedures have been followed.

4.2 STANDARDS COMMITTEE MEMBERSHIP

4.2.1 Standards Committee

The Standards Committee is a standing general committee and its members are elected by the Board of Directors. The members are selected from various interest groups to prevent dominance of any single interest and may include persons from groups such as manufacturers, consultants, educators, trade associations, government, testing/research laboratories, utilities, code bodies, contractors, consumer/users, and environmentalists. Members of the Standards Committee must be of Fellow, Member, or Associate Member grade. Members of Standards Committee may be Life Members or Presidential Members.

4.2.2 Standards Committee Subcommittees

The Standards Committee has the following subcommittees: a) the International Standards Advisory Subcommittee (ISAS), b) the Intersociety Liaison Subcommittee (ILS) c) the Planning, Policy and Interpretations Subcommittees (PPIS), d) the Standards Project Liaison Subcommittee (SPLS), e) the Code Interaction Subcommittee (CIS) , and f) the Standards Reaffirmation Subcommittee.(SRS)

4.2.2.1 International Standards Advisory Subcommittee (ISAS)

ISAS is responsible for monitoring, reporting and submitting recommendations to the Intersociety Liaison Subcommittee concerning ASHRAE's regional and international standards activities. ISAS is comprised of StdC and non-StdC members with knowledge of International Standards Development.

4.2.2.2 Intersociety Liaison Subcommittee (ILS)

ILS oversees the Society's participation in the standards work of other standards development organizations, the American National Standards Institute (ANSI), and ANSI's Technical Advisory Groups on ISO and IEC standards. ILS is comprised of StdC members only.

4.2.2.3 Planning, Policy and Interpretations Subcommittee (PPIS)

PPIS oversees the maintenance and revision of all standards writing and processing procedures and policies, recommending approvals of new Titles Purposes and Scopes and handling interpretations of existing standards when no project committee exists and evaluates requests for joint sponsorships of SCDs. PPIS is comprised of StdC members only.

4.2.2.4 Standards Project Liaison Subcommittee (SPLS)

SPLS oversees the development of standards committee documents (SCDs), training of PC Chairs, oversees work plans, and waivers of the ASHRAE Units policy. SPLS is comprised of StdC members only.

4.2.2.5 Code Interaction Subcommittee (CIS)

CIS oversees the participation by ASHRAE in the development of model codes and standards by other SDOs that have relevance to ASHRAE technical interests. CIS is comprised of StdC and non-StdC members with knowledge of model code development and the deployment of building regulations.

4.2.2.6 Standards Reaffirmation Subcommittee (SRS)



SRS serves as the project committee (consensus body) for reaffirmation, withdrawal or revision (when updating references will not make a substantive change to the standard or guideline) of existing ASHRAE standards.

SRS is a project committee of at least five (5) members, including at least three members of the StdC and applicants responding to a call for members posted in ASHRAE Standards Actions. SRS acts, in limited circumstances, as a project committee for existing standards and is subject to the rules of project committees for reaffirmations, withdrawals, and revisions only to update references, that are not themselves reaffirmations and do not cause a substantive change to the standard. SRS must comply with all ANSI requirements for openness, balance and due process. SRS may act in lieu of a PC, with the advice of the cognizant TC/TG/TRG, to recommend, reaffirm, withdraw or revise an existing standard based on updated references (that do not cause a substantive change to the standards) or add a second system of units to an existing standard, thereby making the existing standard useable in either SI or IP units. (See **Standards Action** [Annex A](#).)

4.3 ESTABLISHMENT OF PROJECT COMMITTEES

4.3.1 Project Committees

Project committees are authorized by the Standards Committee as either Standard Project Committees (SPCs), which are ad hoc committees, or Standing Standard Project Committees (SSPCs). Project committees are the consensus-forming bodies of the Society and no single interest may have a majority vote unless waived in writing (including electronic communication) by the other interests (see balance, [Annex A](#)). Efforts to recruit materially affected and interested parties from diverse interest categories to become members of a non-balanced SPC shall be on-going and documented.

A member of the SPLS is appointed as StdC Liaison to the new project committee. A call-for-members announcement is conducted. Drawing from the resulting applications and recruiting efforts, candidate committee members are recommended in consideration of their personal expertise and their effect on committee balance. Recommended members and non-policy level PC Chairs are approved by a majority vote of a designated subcommittee of Standards Committee, normally SPLS. Standards Committee must concur by majority vote for all policy level PC Chairs.

4.3.2 Project Committee Voting Status

Project Committees may have project committee voting members (PCVM), non-voting members (NVM), project subcommittee voting members (PSVM), or consultants.

4.3.3 PC Activity Initiation

At the first official business meeting of a new PC, the PC shall vote on whether to concur with, or propose changes to, the original TPS. The PC may conduct business (for example, pass motions) only after the membership roster with at least 5 voting members has been approved by SPLS or the StdC. However, the PC Chair may hold organizational meetings for individuals interested in becoming members of the PC, and the group may begin developing the standard or guideline.

4.3.4 Use of Subcommittees

The PC Chair may organize the committee structure using formal subcommittees. If subcommittees are used, the Chair's recommendation for subcommittee Chair must be approved by SPLS. Responsibilities of various PC subcommittees typically are to develop drafts of one or more assigned clauses of a standard, annexes, or addenda; prepare a system of units; prepare text in appropriate language; establish educational activities; develop draft responses to requests for interpretation; or develop proposed responses to comments resulting from public review. Subcommittee actions shall be submitted as recommendations for action by the parent PC.



4.3.5 Project Committee Officers

PC officers consist of a Chair, Secretary, and in some cases also Vice Chair(s) and Subcommittee Chair(s). The Chair and any Vice Chairs or Subcommittee Chairs must be ASHRAE members. Only individual members as defined in Section 4.3.6 are eligible to serve as Chair, Vice Chair or a Subcommittee Chair. The Chair shall appoint a Secretary and recommend a Vice Chair, if the size or activity of the PC warrants one.

4.3.6 PC Members

A PC shall have individual members and designated PCs may have organizational members. Individual members are appointed as “personal members,” not as representatives of any organization, corporation, partnership, or employer. An organizational member designates a representative, and at the organization’s discretion, an alternate, to serve in the absence of the representative, to participate in PC activities in the same manner as an individual member, except that the representative and alternate may not serve as a Chair or Vice Chair of a committee in accordance with 4.3.10. There shall not be more than one PCVM from any one company, association, agency, or entity.

4.3.7 Participation in Committee Activities

Each PC member is expected to attend meetings and participate in other committee activities, such as conference calls, letter ballots, e-mail correspondence, etc. Failure to regularly do so, without an acceptable reason, shall be sufficient cause for the PC Chair to recommend to SPLS removal of a person from the PC membership roster.

4.3.8 Removal for Cause

The PC Chair may recommend removal of a PC member from the roster for due cause, by submitting a recommendation and justification in writing to the SPLS Liaison and Manager of Standards (MOS). PC Chair recommendations for termination of the membership can be based on a failure to actively participate in the PC proceedings or meet PC responsibilities, including but not limited to: missing two consecutive PC meetings without prior written approval from the PC Chair; failure to attend at least 50% of scheduled PC meetings within any twelve month period; and/or failure to return at least 60% of the letter ballots within any twelve month period. The MOS will transmit the recommendations of the PC Chair and SPLS Liaison and related correspondence to SPLS for action in a meeting or by letter ballot. The SPLS Chair may call an executive session of the SPLS or the PC to discuss the matter. Failure to fully disclose any conflict of interest shall be grounds for removal from the PC.

4.3.9 Removal for Cause Initiated by SPLS

SPLS may, without a recommendation of the PC Chair, recommend removal of one or more PC members from the roster for any of the reasons stated in 4.3.8. SPLS may also recommend removal of a PC member from the roster of one or more PCs due to a *conflict of interest* (defined in [Annex A](#)) or a violation of the ASHRAE Code of Ethics by submitting a recommendation and justification in writing to the MOS.

4.3.10 Organizational Members

Subject to approval of SPLS, the PC Chair may nominate an organization as an organizational member (OM). The designated organizational representative (OR) of the OM may serve as a PCVM or a PSVM of the PC. For consideration of appointment as an OM, the organization should normally be a governmental agency, public interest group, or organization that represents a number of entities such as a trade association. Organizations such as educational institutions or corporations and partnerships engaged in commerce shall not be eligible for OM status.

Organizations are informed of the availability of organizational memberships on specific PCs by one or more of the following:

- a) notice in ASHRAE Insights, ASHRAE Journal, ANSI Standards Action, etc.;



- b) posting on the ASHRAE Web Site;
- c) press releases to the applicable trade press; or
- d) direct communication to potential materially-affected organizations.

4.3.11 Criteria for Considering Organizational Members

The PC Chair should consider the following criteria in nominating organizations for OM status on a PC:

- a) the degree to which members of the organization are materially affected by the requirements of the standard;
- b) the ability of the representative of the organization to represent the interests of the members of the organization;
- c) the capability of the organization to provide an individual with appropriate technical or scientific qualifications to serve as their representative, and if desired, another individual with appropriate technical or scientific qualifications to serve as an alternate organizational representative (AOR);
- d) that an official representative of the organization has endorsed the member and the alternate to serve on the project committee; and
- e) the willingness of the organization to abide with the terms of organizational membership.

4.4 Project Committee Size

The PC shall consist of no less than 5 PCVMs with no upper limit, including the Chair. In addition to the PCVMs, the PC membership may also include PSVMs if the PC is organized into subcommittees or NVMs if not organized into subcommittees.

5 RELATIONSHIPS WITH OTHER STANDARDS-DEVELOPING ORGANIZATIONS

5.1 General

The Standards Committee supervises ASHRAE's participation in the standards work of other organizations including the American National Standards Institute (ANSI) and international and regional standards organizations including the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

5.2 Joint Sponsorship

A request to jointly sponsor a standard shall be evaluated by the Standards Committee, considering overlap of expertise and responsibility. The evaluation must be reported to Technology Council. A recommendation for joint sponsorship including a recommendation for the lead organization shall be forwarded to the Technology Council and Board of Directors for approval. A recommendation against joint sponsorship shall be forwarded as an information item to the Board of Directors. If joint sponsorship is approved by the Board of Directors, standards-writing and approval procedures must be negotiated with the other organization by the MOS on behalf of the Standards Committee.

The standards-writing and approval procedures should be those of the lead organizations. If ASHRAE procedures are not adopted, the adopted procedures must be compatible with ASHRAE procedures in regard to openness of proceedings, public review of drafts, and delegation of technical content to the project committee.

6 COMPLIANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) REQUIREMENTS FOR ACCREDITATION

Since 1976, ASHRAE has been accredited by ANSI as a developer of American National Standards and continuation of this accreditation shall be maintained based on ASHRAE procedures and practices for standards development meeting the criteria for accreditation given in ANSI Essential Requirements: Due process requirements for American National Standards (referenced hereafter as ANSI-Essential Requirements).



7 CRITERIA FOR APPROVAL, WITHDRAWAL, AND DISCONTINUANCE OF ASHRAE STANDARDS

7.1 INTRODUCTION

Approval of an ASHRAE Standard requires verification that the requirements for due process and consensus have been met. Approval thus ensures that each ASHRAE Standard is generally acceptable to the directly and materially affected interests.

7.2 GENERAL

Standards shall be designated, developed, published, and maintained in accordance with these Procedures.

7.2.1 Public Review

7.2.1.1 Advisory Public Review (APR)

A PC may vote by majority of the voting membership to recommend to the SPLS Liaison and SPLS Chair that a draft SCD, or portion thereof, be subjected to an APR if the PC believes that the draft contains new, unusual or potentially controversial elements that the PC believes would benefit from increased public scrutiny prior to finalizing the draft for publication public review (no continuation letter ballot, no roll call vote record, no marked up roster, or submittal form is needed). Any comments received as a result of an APR are deemed to be "supportive" and do not need to be "resolved". Apart from acknowledging receipt of each comment, communication with the commenters is optional but may be undertaken to clarify a comment's intent or to invite further participation in the standard development process. The underlying concept of the APR is to gain increased public participation early in the development process and thus to deal with, and potentially resolve, controversy before publication approval is sought. APRs are not submitted through the ANSI process.

7.2.1.2 Normal Track Public Review (NTPR)

A standards action approved by the PC for publication public review that meet any of the following criteria shall be processed as a normal track:

- a) there are negative votes with reason within the PC;
- b) a credible threat of legal action (in writing) against ASHRAE has been made related to the proposed draft;
- c) the proposed draft is related to a Policy Level Standard ; and
- d) the SPLS Liaison has notified the MOS within ten calendar days, from the receipt of the package, with specific justification, that the PC has violated due process.

SPLS must approve the SCD before it can be issued for public review.

7.2.1.3 Fast Track Public Review (FTPR)

A standards action approved by the PC for publication public review that meet all of the following criteria shall be processed as a fast track:

- a) there are no negative votes within the PC;
- b) no credible threat of legal action (in writing) against ASHRAE has been made related to the proposed draft;
- c) the proposed draft is not related to a Policy Level Standard (Policy Level PC Chair may request an exception. The SPLS Chair must grant or deny the exception within ten working days of submittal); and
- d) the SPLS Liaison has not notified the MOS within ten calendar days, from the receipt of the package, with specific justification, that the PC has violated due process.

No additional approvals for issuing the SCD for public review are required.



7.2.2 Publication Approval

Approval of Standards Action by the ASHRAE Board of Directors that have unresolved objectors (commenters or negative PC votes with reason) or a threat of legal action shall be preceded by formally voted recommendations by the project committee and Standards Committee.

Approval of Standards Actions by Technology Council that are policy level SCDs that have no unresolved objectors and no threat of legal action shall be preceded by formally voted recommendations by the project committee and Standards Committee. These Standards Actions shall be reported as an information item to the ASHRAE Board of Directors.

Approval of Standards Actions that are not policy level, that have no unresolved objectors and no threat of legal action shall be preceded by formally voted recommendations by the project committee and processed for publication by ASHRAE Staff. These Standards Actions shall be reported as an information item to the Standards Committee and the ASHRAE Board of Directors.

The SCD shall be deemed to have been approved by the BOD upon approval of its designee.

7.2.3 Quorum Requirements

To conduct standards-related business at a meeting of a project committee, StdC or its subcommittees, Technology Council or the Board of Directors, a quorum must be present. A quorum exists if a majority of the voting membership is present.

7.2.4 Voting Requirements for Standards Actions

Standards actions recommendations must be approved by the project committee (consensus body) with (1) affirmative recorded votes by the majority of the membership of the project committee and (2) affirmative votes from at least two-thirds of those voting, excluding abstentions of the project committee. When recorded votes are taken at meetings, project committee members who are absent shall be given the opportunity to vote before or after the meeting. Persons who cast negative votes on a standards action shall be requested to comment on reasons for their negative votes. If the vote passes with one or more negative votes with reasons for those negative votes, the results shall be held in abeyance until the comments and attempts at resolution of comments (including those unresolved comments received in response to the formal ASHRAE public review (See Section 7.4.6) are transmitted to all eligible voters and they are given an opportunity to change their vote, reaffirm their vote, or to vote. A written response to negative voters with reason voting at a meeting or via letter ballot shall be issued advising each of the disposition of the objection and the reasons why.

Standards Committee, Technology Council and the Board of Directors recommendations for standards actions must be approved by a majority of those voting at a meeting of the Standards Committee, and Board of Directors, or by letter ballot.

7.2.5 Voting Rules for Letter Ballots By Project Committees

The Chair of the PC (or its subcommittees) may authorize a letter ballot to be issued on any matter. Actions of the PC and subcommittees conducted by letter ballot require approval by a majority of the voting membership of the committee. Standards actions, and issuance or revision of an official interpretation require affirmative votes of the majority of the membership and of at least two-thirds of those voting, excluding abstentions. When a letter ballot is conducted via e-mail it is intended that members will not use "Reply to All," but reply only to the sender of the e-mail. A written response to objectors on a letter ballot vote shall be issued, advising each of the disposition of the objection and the reasons why.

7.2.6 Negative Votes on Letter Ballots of PCs and Project Subcommittees



Persons who cast negative votes on a letter ballot shall be asked if they wish to comment on reasons for their negative votes. If the vote passes with one or more negative votes, the results shall be held in abeyance until the comments are transmitted to all eligible voters and they are given an opportunity to reaffirm their vote, change their vote or to vote (by letter ballot or at the next meeting). If a reason is not provided for a negative vote, the eligible voters are informed of the negative vote by distribution of the letter ballot results.

The Chair of the entity voting by letter ballot may offer rebuttal to the comments of the negative voters. After the eligible voters have had ample opportunity (not in excess of two weeks if by letter ballot) to reaffirm their votes, change their votes or to the vote, the results shall be final. If negative votes with comments are received on the second round, all eligible voters will be informed but no further opportunities to change votes will occur.

7.3 MAINTENANCE OF STANDARDS

ASHRAE Standards shall be maintained under periodic maintenance procedures except when use of continuous maintenance procedures has been voted by the Standards Committee. (See definitions of continuous maintenance and periodic maintenance in [Annex. A.](#))

When a PC does not exist, a designated subcommittee of StdC shall (a) form Interpretation Committees to respond to requests for interpretation, and (b) with the advice of the cognizant Technical Committee, Task Group, or Technical Resource Group, shall provide recommendations to the Standards Committee concerning the need for reaffirmation, revision based on updated references or adding a second system of units to a standard, thereby making the standard useable in either SI or IP units, withdrawal or the need to form a new project committee to revise a standard. (See TC, TG, and TRG, [Annex. A.](#))

7.4 DUE PROCESS REQUIREMENTS

The following represent the due process requirements for development of consensus.

7.4.1 Openness

7.4.1.1 Access

Meetings of the Standards Committee, PCs, and their subcommittees are open to all members of ASHRAE and to members of the public who are directly and materially affected by ASHRAE's standards activities. When there is a discussion of a sensitive issue or of a personal nature, the chair of any of these committees or subcommittees may declare an Executive Session, during which only members of the committee or subcommittee and such other individuals invited by the chair shall be present.

7.4.1.2 Barriers

There shall be no undue financial barriers to participation in project committees. Participation shall not be conditional upon membership in ASHRAE or in any standard cosponsoring organization, or unreasonably restricted on the basis of technical qualifications or other such requirements. (See **due process** in [Annex A.](#))

7.4.1.3 Notice

Timely and adequate notice of the initiation and development of a new standard or a substantively revised standard and the establishment of a new PC shall be on the ASHRAE web site. In addition, proposals for new American National Standards and proposals to revise, reaffirm, or withdraw approval of existing American National Standards shall be transmitted to ANSI for listing in Standards Action. Notices should include a clear and meaningful description of the purpose of the proposed activity.



7.4.2 Lack of Dominance

The standards development process shall not be dominated by any single interest category, individual or organization. Dominance means a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints. Unless a claim of dominance is submitted in writing (electronic communications) by a directly and materially affected party, no test for dominance is required. (See Section 7.4.3, and **balance, dominance, and interest category** in [Annex A](#).)

7.4.3 Balance and Interest Categories

Historically the criteria for balance are that a) no single interest category constitutes more than one-third of the membership of a consensus body dealing with safety-related standards or b) no single interest category constitutes a majority of the membership of a consensus body dealing with other than safety-related standards.

The interest categories appropriate to the development of consensus for a standard are a function of the nature of the standard being developed. In defining the interest categories appropriate to the standards activity, consideration shall be given at least to the following:

- Producer
- User
- General

Where appropriate, more detailed categories or subcategories may be considered.

7.4.4 Additional Procedures

ASHRAE shall, as deemed appropriate and needed, provide additional forms, commentary, examples, educational materials, and related information that will support the application and use of these procedures.

7.4.4.1 Appeals to BOD

[Annex B](#) provides an appeal mechanism for procedural complaints regarding any BOD action or inaction.

7.4.4.2 Complaints of Inactions by the Standards Committee, its Subcommittees or Project Committees

In addition to formal appeal of Board standards actions or inactions, failure of the Standards Committee, its subcommittee(s), or a Project Committee to consider a written request may be addressed by writing (including electronic communication) to the Manager of Standards at any time. (See [Annex D](#).)

7.4.5 Public Review Period

The public review comment period shall normally be the minimum allowed by ANSI unless more time is justified. Limited revisions (ISCs) and addenda up to 5 pages may have a 30 day comment period.

7.4.6 Consideration of Public Review Comments Received

All comments to public review drafts shall be submitted electronically via the online comment database. An exception to this rule may be granted by the MOS if the commenter can demonstrate that he/she does not have ready access to the internet. The PC Chair or his/her designee shall submit responses to commenters electronically in the medium specified by MOS.

Public Review Comments received during open public review shall be reported to all members of the PC. Prompt consideration shall be given to all public review comments, including those received through ANSI. An effort to resolve all negative public review comments shall be made, and each negative commenter shall be advised in writing (including electronic communication) of the disposition of the objections and reasons there for. (See **substantive change** in [Annex A](#).) After consideration of comments or because of new information received, the PC may make changes to the draft. Any substantive changes in the draft must be approved and



voted on by the PC for publication public review. The PC may consider any public review comments received after the close of the public review period, or shall consider them as a new proposal.

7.4.6.1 Late Comments Received Under Periodic Maintenance

Comments received after close of open public review under ASHRAE's periodic maintenance procedures may be held for consideration at the next revision at the discretion of the PC.

7.4.6.2 Comments Received Under Continuous Maintenance

An SSPC that is designated by the Standards Committee as operating under continuous maintenance procedures shall take documented, consensus action on each request for change to any part of its standard.

7.4.7 Consideration of Standards Proposals

Prompt consideration shall be given by the Standards Committee to proposals made for developing new standards or revising, reaffirming, or withdrawing existing standards.

7.4.8 Records

Records shall be maintained to provide evidence of compliance with the record retention policy in the ANSI Procedures. Records concerning new, revised, or reaffirmed periodic maintenance standards shall be retained for one complete standards cycle, or until the standard is revised. Records concerning new, revised or reaffirmed continuous maintenance standards shall be retained for a minimum of five years or until the standard is completely revised or reaffirmed. Records concerning withdrawn standards shall be retained for at least five years from the date of withdrawal.

7.5 CONSENSUS

Evidence of consensus associated with the approval of an SCD by the PC shall be documented.

7.6 CRITERIA FOR APPROVAL

With respect to any proposal to approve, revise, or reaffirm an ASHRAE standard, evidence shall be considered that:

- (a) the applicable procedures were followed.
- (b) the SCD is within the scope of ASHRAE's ANSI registered standards activities,
- (c) notice of the development process for the standard was provided to ANSI in accordance with PINS or its equivalent,
- (d) any identified conflict with another ASHRAE or American National Standard was addressed in accordance with the ANSI ER,
- (e) other known national standards were examined with regard to harmonization and duplication of content, and if duplication exists, there is a compelling need for the standard,
- (f) ANSI's patent policy is met,
- (g) ANSI's policy on commercial terms and conditions is met if applicable,
- (h) consensus was achieved, including evidence of the following:
 - i. the applicable procedures were followed;
 - ii. the SCD is within the scope of the registered standards activity;
 - iii. declaration that conflicts with another ANS have been addressed per procedures;
 - iv. a roster of the consensus body indicating the votes of each member, each member's interest category and a summary of the vote; and
 - v. identification of all unresolved negative views and objections, with the names of the objector (s), and a report of attempts toward resolution.
- (i) Any appeal meeting the criteria of B1 through B6 of [Annex B](#) was completed.



In addition, ASHRAE shall consider any evidence provided that the proposed standard is contrary to the public interest, contains unfair provisions, is unsuitable for national use, contradicts federal law(s), or is technically inadequate.

ASHRAE shall not approve standards that duplicate existing or proposed American National Standards unless there is a compelling need.

7.7 CRITERIA FOR WITHDRAWAL OF STANDARD

7.7.1 Requirements

In considering a proposal for withdrawal of an existing ASHRAE Standard, the Standards Committee shall consider evidence that:

- (a) due process requirements were met,
- (b) consensus was achieved concerning the withdrawal of the existing standard, or consensus is lacking for its continued approval,
- (c) the proposal for withdrawal as an ANSI/ASHRAE Standard was provided to the administrator(s) of the appropriate USA Technical Advisory Group(s) and
- (d) any appeal to ASHRAE was completed.

7.7.2 Withdrawal for Cause

In the case of a proposal to withdraw an existing ASHRAE Standard for cause, the Standards Committee shall consider evidence that:

- (a) a significant conflict exists with an American National Standard,
- (b) ANSI's patent policy was violated,
- (c) opportunity for consideration of revision was given but revision was not completed, or
- (d) the ASHRAE Standard:
 - 1. is contrary to the public interest,
 - 2. contains unfair provisions,
 - 3. is technically inadequate, or
 - 4. is unsuitable for national use.

7.7.3 Other Bases for Withdrawal of Approval

The ASHRAE Board of Directors or its designee also may withdraw approval of an ASHRAE SCD upon (a) advice of counsel, based on evidence of a legal nature, or (b) consideration of facts that have subsequently come to the attention of the Board.

7.8 STANDARD PROJECT DISCONTINUANCE

7.8.1 Project Discontinuation Due to Lack of Membership

If a PC Chair and membership are not submitted by the TC or SPLS Liaison within twelve months after the project is approved, the MOS shall:

- a) automatically discontinue if this is a new project where the formation of a PC and TPS have been approved, or
- b) where a revision committee has been authorized, automatically refer the disposition to SRS for either reaffirmation publication public review or withdrawal public review.

Waivers for project discontinuation shall be approved by SPLS and StdC. If the project is discontinued ASHRAE shall notify ANSI.

7.8.2 Project Discontinuation Due to Lack of Performance



If the PC has not officially met for 12 months or is not advancing the development of the SCD in a timely manner then the SPLS Liaison shall determine whether another Chair should be sought or, whether the matter should be sent back to PPIS to re-evaluate the need for the project. If the project is discontinued ASHRAE shall notify ANSI.

7.9 Final Notice

Notice of the final action on standards shall be announced on the ASHRAE web site.

7.10 Emergency Interim Standards Action

Emergency Interim Standards Action may be taken by the Society President, without completing all elements of due process, on an ASHRAE standard that has been published or has received publication approval by the Board of Directors. An Emergency Interim Standards Action has effect for limited duration and is for the exclusive purpose of correcting errors, other than errata, when failure to take timely corrective action would:

- a) substantively undermine the purpose or technical credibility of the standard, taken as a whole, or
- b) constitute undue risk to health or safety of the public or users of the standard.

The Manager of Standards shall notify ANSI if Emergency Interim Standards Action has been taken on a published or candidate American National Standard.

When an Emergency Interim Standards Action is taken, the Standards Committee shall initiate concurrent development of a revision or addendum, or initiate withdrawal procedures, to permanently correct the problem using ASHRAE's consensus procedures. If corrective standards action is not approved by the Board of Directors for publication within two years, the Emergency Interim Standards Action shall be immediately terminated. (See [Annex D](#).)

7.11 Interpretation Requests of Standards

Interpretation requests for a standard must be submitted to the MOS in writing. The Assistant Manager of Research & Technical Services or the Chair of the current or past cognizant PC or the Chairs designee may respond in writing to written requests for unofficial personal interpretations. Cognizant SSPCs, if they exist, and SPCs that have not yet been disbanded will be asked to respond to requests for official interpretations in writing. If no PC exists, StdC will form an Interpretations Committee (IC) to respond. Procedures for interpretations of published SCDs are provided in StdC MOP Reference Manual Section 10. An issuance or revision of an official interpretation requires affirmative votes for the majority of the memberships of each approving and of at least two-thirds of those voting, excluding abstentions.

7.12 Interpretation Requests of ASHRAE Standards Development Procedures

Interpretations requests for ASHRAE's standards development procedures must be submitted to the MOS in writing. ASHRAE Staff may respond in writing to written requests for unofficial personal interpretations. Requests for official interpretations of procedures shall be submitted to PPIS. An issuance of an official interpretation requires affirmative votes for the majority of the memberships of PPIS and of at least two-thirds of those voting, excluding abstentions.

8 PROCEDURES FOR SYNCHRONIZATION OF THE ASHRAE AND INTERNATIONAL STANDARDS REVIEW AND APPROVAL PROCESS

When opportunities arise, the Standards Committee will encourage PCs to synchronize the review and approval process for ASHRAE and international standards consistent with ANSI procedures. If it is recommended that ASHRAE should use the expedited procedures for the identical adoption of an International Standards Organization (ISO) or International Electrotechnical Commission (IEC) standard the procedures in ANSI Procedures for the National Adoption of ISO and IEC Standards as American National Standards shall apply.



9 PATENTS

ASHRAE agrees to comply with the Patent Policy as stated in ANSI Essential Requirements.

10 COMMERCIAL TERMS AND CONDITIONS

ASHRAE agrees to comply with the Commercial Terms and Conditions policy as stated in ANSI Essential Requirements.

11 ANTITRUST POLICY

ASHRAE agrees to comply with the Antitrust Policy as stated in ANSI Essential Requirements.

12 PINS

At the initiation of a project to develop or revise an ASHRAE American National Standard, ASHRAE shall use the ANSI Project Initiation Notification System (PINS) form. Comments will be addressed in accordance with clause 2.5 of the current version of the ANSI ER.



This normative annex is part of the Procedures (PASA)

ANNEX A: DEFINITIONS, ABBREVIATIONS AND ACRONYMS, AND CLASSIFICATIONS

A1 DEFINITIONS

addenda: revisions to a standard in the form of a supplement.

alternate organizational representative (AOR): an individual empowered by an organizational member of a project committee to act on their behalf in the activities of the project committee when the representative of the organizational member is absent.

annex: an appendix or attachment. See **informative annex** and **normative annex**

balance: a condition existing when a) no single interest category constitutes more than one-third of the membership of a consensus body dealing with safety or b) no single interest category constitutes a majority of the membership of a consensus body. (Also see 7.3.3)

clause: the basic component in the subdivision of the text of a standard. See **subclause** and **paragraph**.

code intended standard: A standard intended to be adopted as a code using code language.

code language document: A document that presents a set of requirements related to the design, application, or use of HVAC&R and related technologies where all or portions of the document may be enacted as mandatory enforceable requirements by a political jurisdiction. Portions intended to be enforced (*normative*) are written in mandatory, enforceable language. Portions not intended to be enforced are identified as *informative* and are to be located in informative notes, in informative annexes (appendices) or in other advisory documents. See annex, informative annex, informative notes and normative annex.

cognizant TC/TG/TRG: the ASHRAE Technical Committee, Task Group, or Technical Resource Group within whose scope a particular standard's technical content most logically falls. The cognizant TC/TG/TRG provides technical advice to the Standards Committee when a Standard Project Committee does not exist.

conflict (between standards): refers to a situation where, viewed from the perspective of an implementer, the terms of one standard are inconsistent with the terms of another standard such that implementation of one standard necessarily would preclude proper implementation of the other standard in accordance with its terms.

Conflict of interest: any incompatibility between an individual's private interests and his or her fiduciary duties as an ASHRAE volunteer.

consensus: substantial agreement, in the judgment of a duly appointed authority, reached by directly and materially affected interest categories. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution. It is not required that each separate interest subcategory reach consensus on the standard. For ASHRAE standards projects and any jointly sponsored standards projects that use ASHRAE Procedures, the project committee is the consensus forming body. "Duly appointed authority" means the Board of Directors of ASHRAE and, in the case of jointly sponsored standards, the Boards of Directors of ASHRAE



and the joint sponsor(s). For American National Standards, “duly appointed authority” means the ANSI Board of Standards Review.

continuous maintenance: maintenance of a standard by an SSPC for which procedures have been established to consider and process proposed changes as they are received.

dominance: a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints.

draft types:

advisory public review draft: a draft submitted for public review that contains unusual, potentially controversial or new elements that the **project committee** believes would benefit from increased public scrutiny prior to finalizing the draft for publication public review.

publication public review draft: a draft approved for public review that will proceed directly to publication if, as a consequence of the review, no **substantive changes** are made to the draft.

working draft: an unapproved draft produced for consideration by the **project committee** or a subcommittee.

due process: a course of proceedings carried out in accordance with established rules and principles. Due process allows for equity and fair play for all participants. It means that any person with a direct and material interest in a standard has a right to participate by (a) expressing a position and its basis, (b) having that position considered, and (c) appealing if adversely affected.

Emergency Interim Standards Action: action taken by the Society President, without completing all elements of due process, on an ASHRAE standard that has been published or has received publication approval by the Board of Directors. An Emergency Interim Standards Action has effect for limited duration and is for the exclusive purpose of correcting errors, other than errata, when failure to take timely corrective action would:

- (a) substantively undermine the purpose or technical credibility of the standard taken as a whole, or
- (b) constitute undue risk to health or safety of the public or users of the standard.

errata: a list of errors discovered after a document is published.

Examples: typographical errors

misprints

misspellings

grammatical errors

omission of material approved by the StdC

erroneous inclusion of material

fast track: an approval procedure for a **standards committee document** that meets these criteria:

- a. there are no negative votes within the PC;
- b. no credible threat of legal action (in writing) against ASHRAE has been made related to the proposed draft;
- c. the proposed draft is not related to a Policy Level Standard (Policy Level PC Chair may request an exception. The SPLS Chair must grant or deny the exception within ten working days of submittal); and
- d. the SPLS Liaison has not notified the MOS within ten calendar days, from the receipt of the package, with specific justification, that the PC has violated due process.

(See **normal track**)



five-year review: a review of need for **standards action**, scheduled so that processing and final approval of the resulting recommended action may reasonably be expected within five years from the date of Board approval of publication of ASHRAE Standards and Guidelines, or within five years of ANSI approval as an American National Standard.

foreword: introductory remarks, not part of the standard.

independent substantive change (ISC): a substantive change that is independent of any other substantive change and that does not significantly affect any other requirement in the standard. See **substantive change**.

informative annex: additional information of a non-mandatory nature. Changes to informative annexes are considered non-substantive. Informative annexes can be changed or deleted without requiring public review. See **normative annex and notes**.

informative language: language used in those elements of an SCD for which compliance is not required, often characterized by the use of “should” or “may.”

Informative notes: explanatory information, appearing in a standard, that does not contain requirements or any information considered indispensable for the use of the standard. Informative notes are to begin with the word “(Informative Note(s))” and be placed after the section of the standard to which the note applies. If the “informative note” is more than two sentences, the information shall be placed in an informative annex and referred to by the informative note. Where there is more than one informative note, the notes must be numbered sequentially.

interest: the perspective of a member of a project committee, as judged by his or her present and past sources of income, fees, or reimbursements of related expenses, in the context of the purpose and scope of the project committee. The perspective may also be judged by the recorded views of the individual, or of any organization he/she is employed by or of which he/she is a member.

interest category: a category identified to represent a specific interest.

interest categories: a classification of project committee member **interests**. For some projects, it may be appropriate to designate subcategories of one or more interest category. Default interest categories are:

Producer: A member who represents the interest of those that produce materials, products, systems, or services covered in the project scope.

User: A member who represents the interest of those that purchase or use materials, products, systems, or services other than for household use covered in the project scope.

General: A member who cannot be categorized in any other approved interest category covered in the project scope.

Additional examples of interest categories and subcategories that have been used can be obtained from the MOS.

International Organization for Standardization (ISO): an international non-treaty standards organization based in Geneva, Switzerland. Its members, national standards bodies, promulgate standards covering all fields except electrical. The American National Standards Institute is the U.S. member body.



international organizational liaison (IOL): a non-voting representative of an international trade or professional organization, international standards committee, or other group with an interest in the work of the PC.

interpretation: the written explanation of the meaning of specific provisions of a standard or guideline, as determined by the project committee or the interpretations committee in response to an inquiry.

interpretations committee (IC): a committee of technically qualified individuals whose function is to interpret an ASHRAE standard or guideline.

mandatory language: language that prescribes the requirements of a standard in a manner that is clear and unambiguous. It provides a basis for determining, without a doubt, whether or not compliance with the standard has been achieved. It is often characterized by the use of “shall” or “must.”

non-substantive changes: non-substantive changes are limited to:

- a) changes to the main body of text of the standard or guideline to update information references; to correct errata, punctuation or grammar, typographical errors or style; or to add equivalent SI or I-P values;
- b) changes to the foreword, membership rosters, or other adjuncts not part of the standard or guideline; and
- c) changes to informative appendices or annexes not part of the standard or guideline.

normal track: an approval procedure applied to a **standards committee document** that meets one or more of these criteria:

- a) receives one or more negative votes upon approval for publication or
- b) where ASHRAE receives a written legal threat or
- c) is a policy level standard.

(See **fast track**)

normative annex: additional information of a mandatory nature which, for reasons of convenience, is placed after the main body of the document. See **informative annex**.

Non-Voting Member (NVM): An NVM is an additional type of membership for PCs not formally organized into subcommittees. NVMs are not eligible to vote on PC motions. NVMs are not included in interest balance or quorum requirements.

organization: a group of people representing a particular **interest** such as a trade association, public interest group, or government agency.

Organizational Member (OM): An OM is an organization with a voting representative on the PC that represents the interests of that particular organization rather than serving as an individual.

policy level document: a **standards committee document** designated as “policy level” by the Board of Directors or the Board’s designee.

Project Committee Voting Member (PCVM): PCVMs are eligible to vote on PC motions. PCVMs are also eligible to vote on subcommittee motions to which the PCVM is appointed.

Project Subcommittee Voting Member (PSVM): PSVMs are eligible to vote on subcommittee motions to which the PSVM is appointed. PSVMs are not eligible to vote on PC motions. PSVMs are not included in interest balance and quorum requirements for the PC.



periodic maintenance: review and action on a nominal 5-year cycle to revise a standard or to reaffirm or withdraw a standard.

project committee (PC): a Standard Project Committee or Standing Standard Project Committee.

public review comment: views and/or objections to standards or addenda to standards submitted in accordance with procedures specified in the public review draft during a public review.

rating: the assigned values of those performance characteristics, under stated conditions, by which a piece of equipment may be chosen to fit its application. These values apply to all equipment of like nominal size and type (identification) produced by the same manufacturer.

standard rating: a rating based on tests performed at standard rating conditions.

application rating: a rating based on tests performed at application rating conditions (other than standard rating conditions).

rating conditions: a set of operating conditions under which a level of performance is determined or measured.

standard rating conditions: rating conditions used as the basis of comparison of performance characteristics.

shall: a verb use to indicate a requirement.

should: a verb used to indicate a recommendation.

SPLS liaison: a member of the **Standards Project Liaison Subcommittee (SPLS)** assigned to act as a Standards Committee advisor to a **project committee**.

standard: a document established by authority or rule that defines properties, processes, dimensions, materials, relationships, procedures, concepts, nomenclature, or test methods for rating purposes. Adherence to due process in its development and achievement of consensus are conditions of approval.

standards action: an action recommending or approving publication of a new, revised, or reaffirmed standard or withdrawal of a standard.

Standards Action: a periodical published by ANSI to inform interested persons about American National Standards (ANSs), including proposals to initiate projects to develop or revise ANSs, announce intent to reaffirm or withdraw existing ANSs, communicate status of international standards, announce public review of proposed or revised procedures of ANSI accredited standards developers, etc.

Standard Project Committee (SPC): a committee of technically qualified individuals with a balanced representation of interests whose function is to formulate, review, reaffirm, or revise an ASHRAE standard. The SPC is the consensus-forming body and is responsible for the technical content of the standard. It is discharged upon publication of the standard.

Standing Standard Project Committee (SSPC): a committee similar in membership and function to a Standard Project Committee except that the committee has a continuing assignment of duties and responsibilities with respect to a standard. It is expected to provide addenda as needed, generate revision on a regular basis, and render interpretations.



subcommittee, project committee: a group of individuals appointed by the project committee chair from among the project committee membership who vote on subcommittee activities and whose responsibility it is to develop drafts of one or more assigned sections of a standard, annexes, or addenda; develop draft responses to requests for interpretation; or develop proposed responses to comments resulting from public review; all submitted as recommendations for action by the parent project committee.

substantive change: a change that involves an important (has value, weight or consequence), fundamental (is the foundation, without which it would collapse), or essential (belongs to the very nature of a thing) part or changes the meaning of the material or that directly and materially affects the use of the standard. Changes that may be found substantive when examined in context.

- (a) “shall” to “should” or “should” to “shall;”
- (b) addition, deletion or revision of mandatory requirements, regardless of the number of changes; or
- (c) addition of mandatory compliance with referenced standards.

Changes or deletions made to portions of a draft not intended as part of the approved standard (e.g., a foreword, informative annex or note), are not considered substantive.

See **independent substantive change**.

system of units: inch-pound units (I-P) or International System of Units (SI).

Technical Resource Group (TRG): a committee of technical experts appointed by TAC, to prepare or review technical material for standards, the ASHRAE Handbook, Journal articles and technical papers.

unit conversions - definitions:

alternate system of units: the system of units listed second (expressed in parentheses when dual systems, I-P and SI are used, expressed in either consistent rational or equivalent values.)

equivalent: exact arithmetic conversions, also called “soft conversion.”

primary system of units: the system of units listed first (expressed in rational values).

rational: based on, or derived from, logical or coherent numbers. Rational values are usually, but not necessarily, rounded numbers. Rational values are not necessarily bound by mathematical equivalency of the primary and secondary units systems. The conversion process is sometimes called “hard conversion.”

unresolved public review commenter: an individual who, during the comment period, submitted public review comments to a proposed or revised draft standard, guideline or addendum, was not satisfied with the committee response to those comments and, within the time period and procedure specified in the response, requested to remain “unresolved”.



A2 ABBREVIATIONS AND ACRONYMS

ANS	American National Standard
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
BOD	Board of Directors
CIS	Code Interaction Subcommittee
IC	interpretations committee
IOL	international organizational liaison
I-P	inch-pound units: units using inches, pounds, and other designations; as opposed to SI units in the metric system. Examples are: foot, Btu, horsepower, gallon.
ISC	independent substantive change
ISO	International Organization for Standardization
MOS	Manager of Standards
PC	Project committee. Refers to both an SPC and an SSPC. The use of this acronym means that a procedure applies to both.
PCVM	project committee voting member
PPIS	Planning, Policy and Interpretation Subcommittee
PSVM	project subcommittee voting member
SCD	Standards Committee Document
SI	<p>Le Systeme International d'Unites; the international agreement on the metric system of units. A practical system of units divided into three classes: <i>base</i> units, <i>derived</i> units and <i>supplementary</i> units. The base units are composed of the units of the following seven quantities: length (meter), mass (kilogram), time (second), electric current (ampere), thermodynamic temperature (Kelvin), amount of substance (mole), and luminous intensity (candela).</p>

The second class of SI units contains *derived units*, i.e., units that can be formed by combining base units according to the algebraic relations linking the corresponding quantities. The names and symbols of some units thus formed in terms of base units can be replaced by special names and symbols which can themselves be used to form expressions and symbols of other derived units.

A third class of SI units, called *supplementary units*, contain the SI units of plane and solid angle. (Ref. Le Systeme International d'Unites)



SPC	Standard Project Committee. The use of this acronym means that a procedure applies only to an SPC and not to an SSPC.
SSPC	Standing Standard Project Committee. The use of this acronym means that a procedure applies only to an SSPC and not to an SPC
SPLS	Standards Project Liaison Subcommittee
SRS	Standards Reaffirmation Subcommittee
StdC	Standards Committee
TAC	Technical Activities Committee
TC	Technical Committee appointed by the TAC
TRG	Technical Resource Group appointed by TAC
TG	Task Group appointed by the Technical Activities Committee
TPS	Title, Purpose and Scope



This normative annex is part of the Procedures (PASA)

ANNEX B: APPEALS OF BOARD OF DIRECTORS' STANDARDS ACTIONS OR INACTIONS

B1 SCOPE

This procedure applies to appeals of ASHRAE Standards and of jointly sponsored standards for which ASHRAE is the lead sponsor.

B2 APPEALABLE MATTERS

An action or inaction of the Board of Directors (BOD) to adopt a new ASHRAE standard, an addendum to an existing standard, or to revise, reaffirm, or withdraw an existing ASHRAE standard is subject to appeal.

B3 WHO MAY APPEAL

Any person directly and materially affected by the publication of a new, revision, reaffirmation, or withdrawal of an ASHRAE standard, or lack of such action, may appeal the BOD action or inaction. The appellant must be an unresolved public review commenter, associated with a new, revision, reaffirmation or withdrawal of the ASHRAE standard being appealed, or a PC member who cast a negative vote with reason(s) in relation to his/her vote on the consensus body associated with the creation, revision, reaffirmation or withdrawal of the ASHRAE standard being appealed.

B4 SCOPE OF APPEAL AND BURDEN OF PROOF

An appeal of a BOD standards action or inaction shall be solely based upon procedural grounds. When appeals are filed, the appellant shall demonstrate that ASHRAE Standards development procedures were not followed. Appeals arguments that are based on actions that took place in previous revision cycles will not be considered.

B5 CONTENT OF APPEALS

Each appeal shall:

- (a) Identify the appellant, and include the appellant's contact information;
- (b) Substantiate that the appellant is directly and materially affected by action(s) being appealed;
- (c) Identify with precision the standard or portions thereof, and the procedure(s), alleged improper action or inaction appealed;
- (d) State concisely the basis for the appeal, the remedial action requested, and the nature of any injury to appellant which might accrue from the matter appealed;
- (e) Include any summary supporting data or documentation relied upon as the basis for the appeal;
- (f) Consolidate information to be as concise as possible;
- (g) Only include information that was made available to the PC prior to the final vote of the PC;
- (h) Include the filing fee.

B5.1 FILING FEE

Each appeal shall be accompanied by a filing fee in the amount established by the Technology Council. The filing fee is predetermined and shall be listed on the Appeals Submittal Form. The fee may be waived or reduced by the Chair of the Technology Council upon sufficient evidence of hardship submitted by the appellant. If the filing fee is not submitted by the appeal filing deadline date by the appellant then the appeal shall be dismissed unless an exception has been granted prior to the close of business on the filing deadline date.

B5.2 COPIES

It shall be the responsibility of the appellant to submit an electronic copy and if requested by the Manager of Standards, up to twenty-five (25) paper copies of each appeal filed at the time of the original electronic submittal.

B6 NOTIFICATION PROCEDURES

Within 15 days following BOD action on a standard, that results in approval of a new, revision, reaffirmation or withdrawal of a standard or addenda to a standard, the Manager of Standards (MOS) shall notify in writing (including electronic communication) all unresolved public review commenters and/or a PC member who cast negative votes with reason(s) in relation to his/her vote on the consensus body of the BOD action and inform them of their right to appeal that action.

B6.1 An appeal, must be received by the Manager of Standards (MOS) of ASHRAE within 15 working days of the date on the notification letter regarding the BOD action. The Chair of the Appeals Board may grant an extension, if requested prior to the close of the initial 15 working day period and if sufficient justification is provided.

B6.2 Normally, any standards action by the BOD will be suspended during pendency of appeal(s), appropriately filed. The President may, however, maintain the BOD action until and if the Appeals Panel decides to dismiss the appeal, without a hearing, up to a maximum of 90 days. If the Panel decides to dismiss the appeal without a hearing, the President may maintain the action until the next meeting of the Board of Directors. The appealed BOD action shall be immediately suspended if the Appeals Panel does not dismiss the appeal.

B6.3 The MOS shall acknowledge receipt of the appeal, copy acknowledgement to the Chief Staff Officer, notify the President, and send copies of the appeal to the Appeals Board Chair and to the Chairs of Technology Council, Standards Committee and the Project Committee (PC) which developed or revised the standard, if applicable. Upon receipt of the appeal, an Appeals Panel will be established in accordance with Section B8 for the purpose of determining if the appeal will be heard or if the appeal will be dismissed without a hearing.

B7 APPEALS BOARD

B7.1 An Appeals Board and a chair of the Board shall be appointed by the ASHRAE President, with the approval of the Board of Directors. The Appeals Board shall have 15 members. The Appeals Board shall consist of past members of the BOD, past members of the Standards Committee or Technology Council, and/or persons who are knowledgeable about the ANSI Standards development process.



B7.2 Terms of Membership

Terms shall be staggered so that approximately one-third of the membership of the Appeals Board is appointed each year. Members shall be appointed for a term of three years commencing on July 1, and shall be eligible for reappointment for one additional 3-year term, for a total of two consecutive terms. A member of the Appeals Board may serve beyond the normal two-term limitation if the member is serving as chair, provided the term of chair is contiguous with the six-year tenure as a member. The total maximum length of service under such circumstances would be nine years.

B7.3 Vacancies

A vacancy in the membership of the Appeals Board shall be filled for the remainder of the term by an individual appointed by the ASHRAE President.

B7.4 Conflict of interest

A member of the ASHRAE Appeals Board shall act at all times in a manner that promotes confidence in the integrity and impartiality of ASHRAE's processes and procedures and should avoid a conflict of interest or the appearance of a conflict of interest in connection with all ASHRAE Appeals activities. Should the Appeals Board Chair have a conflict of interest with any appeal he/she shall select another member of the Appeals Board to serve in his/her place with respect to consideration of that appeal.

If a materially affected party (either the appellant or the respondent) asserts that it believes a member of the ASHRAE Appeals Board has a conflict of interest, that materially affected party is required to state the reason(s) for its belief. That information shall then be forwarded to the member of the ASHRAE Appeals Board identified as having a possible conflict for that person's response. If that member disagrees with the assertion, then the Chair of the ASHRAE Appeals Board shall make a final determination as to whether a conflict of interest exists.

Members of the ASHRAE Appeals Board who are disqualified from a particular discussion shall not participate in the arguments, deliberations or decisions.

B7. 5 When appeals of jointly sponsored standards are being considered by ASHRAE as lead sponsor or by ANSI, the joint sponsor shall assist in preparing or responding to appeals in its field of expertise.

B8 CONSIDERATION OF APPEALS

B8.1 When an appeal is received by ASHRAE Headquarters in accordance with Section B6.3 six members of Appeals Board shall be randomly selected from a pool of all Appeals Board members that do not have a conflict to hear the appeal. At least four of those selected shall be appointed as the Appeals Panel and the other 2 shall be appointed as alternates. The Appeals Panel alternates will participate in the hearing activities in the event that one of the four other members are unable to serve. The Appeals Board chair will chair the Appeals Panel.

B8.2 Members of the Appeals Panel shall not have been a PCVM or PSVM on the project committee that is the subject of the appeal during the three years prior to the standards action under appeal. Members of the Appeals Panel shall not have voted on the draft that is the subject of the appeal as a member of the Standards Committee or Board of Directors.

B8.3 The Appeals Panel shall first decide if the appeal shall be dismissed without a hearing. Non-compliance with Section B5 or lack of grounds for an appeal may be reasons for dismissal. To assist in



this decision, the Appeals Panel Chair may request a rebuttal statement from the respondent (the Chair of the Standards Committee or his/her designee, or the Chair of the PC or his/her designee), as appropriate. The Appeals Panel Chair shall inform the appellant within 30 days of the receipt of the rebuttal whether the appeal will be dismissed without a hearing, decided after a hearing, or decided without a hearing.

B8.4 If the appeal is not dismissed, the BOD action which has been appealed shall be immediately suspended, if not already suspended according to the first sentence of B6.2, and each claim in the appeal shall be considered separately and basic grounds given for each decision. The Appeals Panel shall decide whether a hearing is warranted or if a decision can be made and reported to the President on the appeal without a hearing.

B9 HEARING OF APPEALS

B9.1 Notice

If the appeal is to be heard, the Appeals Panel chair shall arrange for consideration of the appeal by meeting, or documented telephone conversations. Both the appellant and the respondents (the Chair of the Standards Committee or his/her designee, or the Chair of the PC or the Chair's designee, as appropriate) shall be given at least 45 days notice of the hearing date (from the date on the notification letter), location, and time for a hearing or 30 days notice of the hearing date (from the date on the notification letter) for a hearing conducted by conference call. The 30 or 45 days may be waived if the appellant and the respondents agree in writing (including electronic communication). During this period a rebuttal of the written statement of appeal shall be submitted to the MOS who shall distribute it to the Appeals Panel and to the Appellant. The rebuttal, if not previously requested, from the respondent(s) shall be due within 15 working days of the date on the letter of notification. The Chair of the Appeals Panel may grant an extension if requested prior to the close of the initial 15 working day period and if sufficient justification is provided. The rebuttal statement shall be sent to the MOS, who shall distribute it to the appellant and the Appeals Panel.

B9.2 The Hearing

At the hearing, the appellant and respondent(s) shall provide the Chair of the Appeals Panel with 15 copies of an outline of their oral presentation or a copy of what will be displayed for their electronic presentation. No new issues outside of those issues raised in the submitted appeal may be presented at the hearing. Only documentation that the Appellant/Respondent has already been given, which supports raised issues, will be permitted in the presentation. Both the Appellant and the Respondent are permitted to have people speak on their behalf (i.e.: experts). However, each party is only allowed a designated amount of time and that time will be shared by any and all people speaking for that party. No additional time will be granted for guests, speakers, experts, etc.

B9.3 A Standards Committee Liaison and the BOD Ex-Officio member of the Standards Committee shall be invited by MOS to attend the hearing. The hearing shall be open to representatives of directly and materially affected persons, although the number of any interest group may be limited at the discretion of the Appeals Panel Chair. Anyone planning to attend the hearing shall notify the MOS within a minimum of 15 days prior to the hearing date. The deliberations of the Appeals Panel shall be held in Executive Session.

B10 APPEALS PANEL DECISION

The Appeals Panel shall decide within 45 days of the hearing, by majority vote, that the appeal, or any parts of the appeal, be upheld or denied. The Appeals Panel Chair shall, within 14 days following the Appeals Panel's decision, notify the appellant(s), Chief Staff Officer, Director of Technology, Manager of



Standards, President, Chair of Technology Council, Chair of the Standards Committee, and Chair of the PC of the decision. The decision of the Appeals Panel to uphold, deny, or dismiss an appeal shall be final. If the appeal is dismissed or denied by the Appeals Panel, the action of the BOD, which was appealed shall become effective immediately.



This normative annex is part of the Procedures (PASA)

ANNEX C: COMPLAINTS OF ACTIONS OR INACTIONS BY THE STDC, ITS SUBCOMMITTEES OR PCs

In addition to formal appeal of BOD Standards actions or inactions (PASA Annex B), failure of the StdC, its subcommittee(s), or a PC to consider a written request may be addressed by writing to the MOS at any time.

- a) A written complaint shall be sent to the MOS and the MOS shall forward it to the Chair of the Committee in question. The MOS shall acknowledge receipt of the complaint (i.e., Subject Committee Chair).
- b) The Subject Committee Chair shall provide a written response to the complainant, with a copy to the MOS within 15 working days of receipt of the complaint. A waiver to the response period may be requested by the Chair or ASHRAE Staff to the Chair of the next higher body. (e.g. StdC Chair for a PC Chair). The waiver request shall be promptly addressed.
- c) The complainant shall notify the Subject Committee Chair and MOS in writing within 15 days from the receipt of the response whether or not the response resolves the complaint. If no response is received then the higher body, the complainant and the Subject Committee Chair will be notified that the complaint is resolved.
- d) If the response does not resolve the complaint, the complaint shall be forwarded to the next higher body. The next higher body shall place it on its next agenda for consideration but a meeting shall be called no later than 15 working days after receipt of the complaint.
- e) When the complaint has been heard by the next higher body, the Chair of that body shall notify the complainant in writing, with a copy to MOS, and to the Chair of the committee in question of the committee's decision within 15 days. (The next higher body is the committee, which approves the actions of the committee in question).
- f) The final level to resolve the complaint shall conclude at Technology Council. Should the unresolved complaint reach Technology Council, Technology Council shall have the authority to decline to hear the complaint.



This normative annex is part of the Procedures (PASA)

ANNEX D: UNITS POLICY

The units use or application policy shall include, as a minimum, time-dated directions on the use of SI and I-P in all ASHRAE publications.

TC 1.6 shall serve as the authority on SI and I-P usage and application.

Research projects; codes, standards, guidelines, and addenda thereto; special publications; Insights articles; Journal articles; and Handbooks shall be prepared using the International System of Units (SI) and/or inch pound units (I-P) in formats approved by the Publishing and Education Council.

The Publishing and Education Council shall review annually the approved formats to be used in ASHRAE publications, considering suggestions from members and committees, and shall establish any changes in the approved formats.

The Publishing and Education Council shall consider this Units Policy annually and shall recommend to the Board of Directors the formats to use in ASHRAE publications.

- (a) The format for ASHRAE publications shall be dual units, except in cases determined by the Publishing and Education Council, where two separate versions are to be published, where one is rational SI and the other is rational I-P. For selected ASHRAE standards and guidelines, the Standards Committee may approve use of SI units only.
- (b) In dual unit publications, the units used in calculating the work being reported shall be listed first. The alternate system of units should follow in parentheses. Authors shall round off equivalents in the alternate system of units so that they imply the same accuracy as is implied with primary units. Exceptions require the approval of the Director of Publishing and Education. Handbook volumes shall be published in separate SI and I-P editions.



This normative annex is part of the Procedures (PASA)

ANNEX E: Procedures – Emergency Interim Standards Action

E1 Justification

The burden of demonstrating need for an Emergency Interim Standards Action rests with the proposer. Interested persons may submit proposals for Emergency Interim Standards Actions to the MOS.

Proposals must include the following information:

- a) identify the proposer, affiliation and contact information;
- b) identify the standard or guideline and clause containing the error,
- c) describe the error claimed and provide supporting information or data, if any,
- d) recommend a change in text, equation, etc. that would eliminate the error or reduce it to acceptable limits and provide supporting information or data, if any,
- e) show compliance with the criteria of Section 6.9(a) or 6.9 (b), and
- f) identify the type of harm that has been or may be caused by the error.

Proposals that meet the criteria of Section 6.9 shall be forwarded to the body designated in E5.

E2 PC or PPIS Recommendation

When a PC having jurisdiction exists, the PC shall submit a recommendation to the MOS on disposition of a proposed Emergency Interim Standards Action at a PC meeting or by letter ballot within 14 days. When a PC does not exist, PPIS shall act in lieu of a PC.

E3 MOS Recommendation

If the PC or PPIS fails to submit a recommendation within 14 days, the MOS shall submit his/her recommendation.

E4 Review and Comment

Upon receipt of a recommendation resulting from E2 or E3, the MOS shall circulate the proposed Emergency Interim Standards Action and recommendation within seven days to the StdC, the Director of Technology, and the MOS for review and comment.

E5 President Will Act

A package composed of the proposed Emergency Interim Standards Action, recommendations resulting from E2 or E3, and recommendations from the Standards Committee Chair, Director of Technology, and MOS, whether positive or negative, shall be submitted within 14 days of receipt by the MOS for the President's consideration and decision.

E6 Notifications

The MOS shall issue notification of the President's decision to the proposer, the Editor of the ASHRAE Journal, and ANSI, and shall initiate implementation of the decision as appropriate.



Case 1:13-cv-01215-TSC Document 122-8 Filed 12/22/15 Page 15 of 174		
USCA Case #17-7039 Document #1715850 Filed 01/31/2018 Page 63 of 573		
Revision	Change	Approval Date
Original Release	The original edition of the <i>Procedures for ASHRAE Standards Actions Under the ANSI Organization Method</i> (PASA), dated June 30, 1994 superseded all previous documentation for communicating ASHRAE's procedures as a basis for continuation (re-accreditation) under the ANSI Organization Accreditation Method.	June 29, 1994
A	The first revision was approved by the Board of Directors on February 2, 1995 and incorporated nine changes for clarifications and in response to comments resulting from ANSI public review of PASA.	February 2, 1995
B	On April 28, 1995, staff incorporated clarifying revisions to the figures in informative Appendix C and added a new Figure 6. ANSI reaccredited ASHRAE on August 4, 1995 based on this edition.	April 28, 1995
C	The third revision was approved by the ASHRAE Board of Directors on June 27, 1996 and incorporated twelve changes in response to recommendations in the ExSC Appeals Panel decision letter dated April 23, 1996, the draft ANSI Report of Audit of ASHRAE procedures and operations dated June 10, 1996, and the need for clarification.	June 27, 1996
D	The fourth revision included broadening the section on membership, by allowing for possibilities for organizational membership. Additionally, this revision incorporates some changes involving written responses to commenters and resolution of commenters. The ASHRAE Board of Directors approved this version January 27, 1999. ANSI reaccredited ASHRAE on May 7, 1999.	January 27, 1999
E	This revision includes changes to allow the newly approved <i>Board Policy Committee for Standards</i> to have oversight authority for certain project committees. It also deleted references to specific sections of ANSI procedures so that revision to PASA would not be necessary when section numbering in the ANSI procedures changed. The ASHRAE Standards ftp site (ftp.ashrae.org/stds-info) is now utilized as the means for advertising standards activities, in lieu of the <i>ASHRAE Journal</i> . The records retention policy has been clarified, and the references to formal Mediation Meetings have been removed. Finally, the appeals procedures were modified to more closely match the ANSI appeals procedures. ANSI reaccredited ASHRAE on November 21, 2001.	June 29, 2000
F	Editorial revision of Section 6.2.1.2 made to reflect the oversight authority of the Board Policy Committee for Standards.	February 1, 2001
G	Editorial revision of Sections 4.1 and 6.2 made to reflect removal of Appendix C.	June 27, 2001
H	This revision included changes in Sections 6.2.1.2-6.2.1.3.2 to require letter ballot votes for publication approval by the Consensus Body. Appendix B3 was revised to further clarify the appeals process.	January 17, 2002
I	This revision includes changes in Sections 5, 6.3.6, 6.2.1.3, the Appendix A1 definition of "balance," and the addition of Section 8 – Patents. Appendix B was revised to assign final approval of appeals to the Board Policy Committee for Standards.	June 27, 2002
J	This revision includes changes in sections 4.1, 6.2.1, 6.2.2, A1, and A2 to change the reference from Technical Evaluation Committees (TEC's) to Technical Resource Groups (TRG's). Changes were also made to sections 6.3.1.3 and 6.7 to remove the reference to the ASHRAE ftp site.	January 30, 2003



K	This revision includes the addition of a sentence to section 6.3.4.2 (Complaints of Inactions) that clarifies who addresses complaints.	July 3, 2003
L	This revision addresses the following issues: the clarification of ANSI requirements, removal of the Board Policy Committee for Standards (BPCS) oversight responsibility and changes to the appeals process.	July 1, 2004
M	This revision replaces language that was inadvertently deleted in the Nashville revision, to provide the provision to appoint the Appeals Panel Chair.	June 30, 2005
N	This revision includes revisions to section 4.3.2 (Joint Sponsorship) so that the MOS can negotiate terms of the joint sponsorship agreements. Changes were made to B6, B9.1, and B9.2 to clarify the appeals process. Section B9.2, The Hearing, was added to clarify the rules during the Appeals hearing.	January 26, 2006
O	This revision includes revisions to Section 4.3.2 (Joint Sponsorship) and removes approval by Technology Council and the BOD of the final negotiated cosponsorship agreement.	March 20, 2006
P	This revision includes adding the terms “including electronic communication” to Section 4.2.1.1, Section 6.4.3.2, and B9.1. This also includes revisions to 4.3.2 to clarify the language regarding Joint Sponsorship approval. Section 9, Commercial Terms and Conditions, was added. The definition of contact information was added to Appendix A. Revisions were made to Section B5 to add request for contact information and to limit the materials that are allowed in appeals.	June 29, 2006
Q	This revision includes adding the cm records retention policy to Section 6.3.8, adding Section 6.7, Interpretation Requests, and adding Annex C, Units Policy to PASA per the request of ANSI.	March 2, 2007
R	This revision in the Introduction section includes, moving part of the information to an informative forward.	October 24,2008
S	This revision in Section 3, changes Appendix to Annex.	October 24, 2008
T	This revision in Section 5 deletes text from ANSI Essential Requirements	October 24, 2008
U	This revision in Section 6.2.1, (Approval) includes Technology Council in the approval of publication drafts	October 24, 2008
V	This revision includes in Section 6.2.1.2, (Voting Requirements for Standards Actions), changing the vote from letter ballot to recorded votes, adding Technology Council and allowing the Board or its designees to vote.	October 24, 2008
W	This revision includes the deletion of Section 6.2.1.3	October 24, 2008
X	This revision includes in Section 6.2.2 (Modification of Standards) the addition of the need for a revision to a standard.	October 24, 2008
Y	This revision to Section 6.2.4 (Substantive Changes) deletes the entire section.	October 24, 2008
Z	This revision to Section 6.3.2 (Balance and Lack of Dominance) changes it to read like ANSI Essential Requirements 2008.	October 24, 2008
A	This revision to Section 6.3.3 (Interest Categories) deletes language in order to simplify the interest categories.	October 24, 2008
AB	This revision to section 6.3.4.1 (Appeals to BOD), includes the change from Appendix to Annex and includes the deletion of identifiable, realistic and readily available text.	October 24, 2008



AC	This revision to Section 6.3.6(Consideration of Comments Received) includes the addition of language specifying Public Review. Title reflects as Consideration of Public Review Comments Received and within the paragraph, “public review” was inserted.	October 24, 2008
AD	This revision to Section 6.4 (Consensus) was rewritten to require documentation that the consensus is in accordance with ANSI Essential Requirements and PASA.	October 24, 2008
AE	This revision to Section 6.5 (Criteria for Approval) modified letter (i) to change Appendix to Annex.	October 24, 2008
AF	This revision to Section 8 (Patents) was editorially modified. Removed the text “such” and “or guideline” from the first sentence.	October 24, 2008
AG	This revision to Appendix A includes: <ul style="list-style-type: none"> • The deletion of ASHRAE Information Representative • Modification of the definition of balance by deleting “dealing with product standards.” • Modified definitions of continuous maintenance definition and interest category • Modified definition of informative annex • Modified interest categories definition; deleted the definition for all subcategories, user, producer and general • Added a Method of Test Standard definition • Modified the definition for normative annex • Modified the definition for public review comment • Deleted testing standard definition • Modified unresolved commenter definition • Deleted Section A3 	October 24, 2008
AG	This revision to Appendix B includes: <ul style="list-style-type: none"> • Appendix B2, deleted the availability of EISA’s to be appealed to the Board as this can be handled through the complaint process • Appendix B3, modified who the appellant must be and how the vote should be casted • Appendix B5.2, inserted the word “copies” • Appendix 6, specified who the MOS should notify, public review commenters and/or a PC member who cast negative votes with reason(s) in relation to his/her vote on the consensus body • Appendix B10, added language requiring that the Appeals Panel vote within 45 days of the hearing whether or not the appeal is upheld or denied. 	October 24, 2008
AH	This revision to Section 4.1 includes the addition of the word <i>publishing</i> .	February 25, 2011
AI	This revision to Section 6 title includes the addition of language for discontinuing ASHRAE standards.	February 25, 2011
AJ	This revision to Section 6.3.6 includes language in the first paragraph straight from the PC MOP regarding information about the online comment database.	February 25, 2011



AK	<p>The revision to Section 6.5 includes added and deleted language. The additions are from the ANSI Essential Requirements and are listed below:</p> <ul style="list-style-type: none"> • Notice of the development process for the standard was provided to ANSI in accordance with PINS or its equivalent • Identification of all unresolved negative views and objections, with names of the objector(s), and a report of attempts toward resolution • The standard is within the purpose and scope approved by the Standards Committee •and if duplication exists, there is a compelling need for the standard • ANSI's policy on commercial terms and conditions is met if applicable <p>The deletion of Section 6.5 includes:</p> <ul style="list-style-type: none"> • StdC prohibitions of commercial references, exclusive use of proprietary materials, or prescribing a proprietary agency for quality control or testing are met, and 	February 25, 2011
AL	The revision to Section 6.7, 6.7.1 and 6.7.2 includes the addition of language regarding the criteria for project discontinuance. The previous sections 6.7 and 6.8 been renumbered due to this addition to 6.8 and 6.9 respectively.	February 25, 2011
AM	Section 6.10 was added, it includes the word <i>writing</i> to clearly specify the method in which interpretation requests are received and responded to. It also editorially corrects the spelling of the word <i>revision</i> .	February 25, 2011
AN	The revision of Section 8 deletes the entire paragraph and adds a blanket statement "ASHRAE agrees to comply with the Patent Policy as stated in the ANSI Essential Requirements."	February 25, 2011
AO	The revision of Section 9 deletes the entire paragraph and adds a blanket statement "ASHRAE agrees to comply with the Commercial Terms and Conditions Policy as stated in ANSI Essential Requirements."	February 25, 2011
AP	This revision adds a Section 10 which includes information regarding PINS. It states "At the initiation of a project to develop or revise and ASHRAE American National Standard, ASHRAE shall use the ANSI Project Initiation Notification System (PINS) form."	February 25, 2011



AQ	<p>The revision to Annex A includes deletions of definitions. Deleted definitions include:</p> <ul style="list-style-type: none"> • ASHRAE Alternate – a designated alternate to the ASHRAE Representative appointed by the Standards Committee of another organization and empowered to vote on behalf of ASHRAE on matters dealing with standards. (See ASHRAE Representative) • ASHRAE Representative – an official representative of ASHRAE appointed by the Standards Committee to a committee of another organization and empowered to vote on behalf of ASHRAE on matters dealing with standards. • Contact information – name, affiliation, mailing address, email address, daytime telephone numbers and facsimile numbers • Independent substantive change – a substantive change that is independent of any other substantive change and that does not significantly affect any other requirement in the standard. See substantive change. • Method of Test Standard – a standard setting forth the methods of measuring capacity or other characteristics of a specified material, component, or system, together with a specification of instrumentation, procedure, and calculations. • TC Technical Committee appointed by the TAC 	February 25, 2011
AR	<p>The revision to Section A2 includes the addition of the terms below:</p> <ul style="list-style-type: none"> • BOD Board of Directors • PPIS Planning, Policy and Interpretations Subcommittee • SCD Standards Committee Document • SPLS Standards Project Liaison Subcommittee • SRS Standards Reaffirmation Subcommittee • TPS Title, Purpose and Scope <p>The revision to Section A2 also includes a deletion of the terms below:</p> <ul style="list-style-type: none"> • TC/TG/TRG a TC, TG or TRG • TC Technical Activities Committee 	February 25, 2011
AS	The revision to Section 6.2.1 removes one of the approving bodies, Technology Council.	February 25, 2011
AT	The revision to Section 6.2.1.2 removes Technology Council and clarifies comment resolution attempts. It also notes that comments received that are not relevant to the proposed standards action under consideration shall be treated as a new proposal.	February 25, 2011
AU	The revision to Section 6.5 ensures that all procedures were followed and it provides the procedures for documenting consensus.	February 25, 2011
AV	This revision adds a sentence to Section 10 which states: Comments will be addressed in accordance with clause 2.5 of the current version of the ANSI ER.	February 25, 2011
AW	The revision to Annex A adds definitions for informative language and notes. It also updates the current definitions; continuous maintenance, informative annex, normative annex, shall, should, standard, and unresolved public review commenter.	February 25, 2011
AX	The revision to Section B9.1 decreases the notice time to 30 days for appeal hearings if the appeal hearing is being held via conference call.	February 25, 2011



AY	The revision to Section 4.2.1.1 makes PASA consistent with ASHRAE's Project Committee Manual of Procedures.	May 15, 2012
AZ	The revision to Section 6.3.5 makes PASA consistent with ANSI ER.	May 15, 2012
BA	The revision to Annex B would provide a larger pool of members to expeditiously hear appeals.	May 15, 2012
BC	The revision to Section 6.2.1.2 brings PASA in line with StdC MOP and StdC Reference Manual.	June 27, 2012
BD	The revision to Section 6.3.6 is a direct result from the ExSC comments during the last public review of PASA. Procedures are included from when a Project Committee makes substantive changes to the draft after consideration of comments or when new information is received.	June 27, 2012 (PASA Reaccredited 10/12/12)
BE	Editorial change to Section 6.3.6.2, deleted last part of the sentence that states "in accordance with the continuous maintenance schedule."	September 27, 2013
BF	The revision to Section 4 adds additional information regarding Standards Subcommittees and its function as well as membership, most of this information was pulled from the PC MOP per ANSI's request to streamline our documents.	PASA Reaccredited October 22, 2014
BG	The revision to Section 7.2.1 adds information regarding the different types of Public Review and the publication approval level requirements. Section 7.2.4 also clarifies the voting requirements for Standards Actions, 7.4.2 and 7.4.3 clarifies lack of dominance and balance and interest categories. Section 7.6 clarifies criteria for approval. Section 7.8 allows SPLS and StdC to approve waivers for discontinuing a project. Section 7.11 supplies additional guidance for interpretation requests. PPIS can approve interpretations to the Standards Development Procedures.	PASA Reaccredited October 22, 2014
BH	Annex A and A2 was revised to include additional definitions. Annex B was revised to clarify appealable matters, content of the appeal, filing fee, notification procedures, and conflict of interest. Annex C (Complaints of Actions or Inactions by the StdC, its Subcommittees or PC's) and Annex E (Emergency Interim Standards Action) were added into PASA.	PASA Reaccredited October 22, 2014
BI	Annex A - editorial updates were made to the definitions: <i>notes</i> and <i>code language document</i> . "Notes" is now "Informative Notes".	November 10, 2014
BJ	Section 4.2.2.6 clarified SRS will comply with ANSI requirements of openness, balance and due process. Section 7.11 adds the Chair's designee can also issue official interpretations of standards. Section 11 Antitrust Policy was added to PASA. Annex A, informative notes was clarified. Annex B removes the option for technical appeals.	PASA Reaccredited April 29, 2015
BK	Section 7.4.4.1 was editorially corrected to mirror Annex B. (removes technical appeals)	PASA – editorial September 3, 2015



EXHIBIT 127

INSTRUCTIONS — PLEASE READ CAREFULLY

Type or print legibly in black ink. Use a separate copy for each proposal. Limit each proposal to a **SINGLE** section. All proposals **must be received by NFPA by 5 p.m., EST, Friday, November 7, 2008**, to be considered for the 2011 National Electrical Code. Proposals received after 5:00 p.m., EST, Friday, November 7, 2008, will be returned to the submitter. If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee.

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Please indicate in which format you wish to receive your ROP/ROC ☐ electronic ☐ paper ☐ download
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date Name Tel. No.

Company

Street Address City State Zip

Please indicate organization represented (if any)

1. Section/Paragraph

2. Proposal Recommends (check one): ☐ new text ☐ revised text ☐ deleted text

3. Proposal (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

4. Statement of Problem and Substantiation for Proposal: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

5. Copyright Assignment

- (a) ☐ I am the author of the text or other material (such as illustrations, graphs) proposed in this Proposal.
- (b) ☐ Some or all of the text or other material proposed in this Proposal was not authored by me. Its source is as follows (please identify which material and provide complete information on its source):

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Mail to: Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471

7/17/2007

JA1821

NFPA-PR0017531

EXHIBIT 128

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National Fire Protection Association
1 Batterymarch Park, P.O. Box 9101
Quincy, Massachusetts 02169-7471

Fax to: (617) 770-3500

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Date Rec'd _____

- Notes:**
1. All proposals must be received by 5:00 p.m. EST on Friday, November 4, 2005. Proposals received after 5:00 p.m. EST, Friday, November 4, 2005, will be returned to the submitter.
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 3. If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee.

Please indicate in which format you wish to receive your ROP/ROC: ☐ electronic ☐ paper ☐ download

Date _____ **Name** _____ **Tel. No.:** _____

Company _____

Street Address _____

Organization Represented (if any) _____

1. Section/Paragraph _____

2. Proposal Recommends (check one) ☐ new text ☐ revised text ☐ deleted text

3. Proposal (include proposed new or revised wording or identify wording to be deleted). Note: Proposed text should be in a legislative format: i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).

4. Statement of Problem and Substantiation for Proposal. Note: State the problem that will be resolved by your recommendation; give the specific reason for your proposal and include copies of the tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.

5. ☐ This Proposal is original material. Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.

☐ **This Proposal is not original material; its source (if known) is as follows:** _____

**If you need further information on the standards-making process, please contact the
Standards Administration Department at (617) 984-7249.
For technical assistance, please call NFPA at (617) 770-3000.**

I hereby grant the NFPA all and full rights in copyright, in this proposal, and I understand that I acquire no rights in any publication of NFPA in which this proposal in this or another similar or analogous form is used.

Signature (required)

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JA1824-JA1832

EXHIBIT 130

From: Pace, John </O=ASTM/OU=FIRST ADMINISTRATIVE
GROUP/CN=RECIPIENTS/CN=JPACE>
Sent: Tuesday, March 24, 2009 5:29 AM
To: Hooper, Kathe <khooper@astm.org>
Subject: Fw: Question related to copyright

Fyi ... I thought I had cc'd you!

-----Original Message-----

From: Pace, John
To: FRVANBUREN@dow.com <FRVANBUREN@dow.com>
Sent: Mon Mar 23 17:49:07 2009
Subject: RE: Question related to copyright

Dear Mr. Van Buren:

I am responding on behalf of Kathe Hooper as she oversees all licensing and special permissions requests for ASTM International.

First, Kathe has correctly stated ASTM Organizational policy: ASTM does not allow the posting of any of our copyrighted standards or other intellectual properties on the open Internet for possible free access or download.

Second, the Disclaimer and Copyright notice of the European Patent Office does not provide sufficient protection nor use restraint if we allowed such a request. There is no definition or limit as to who may access or download the copyrighted information from the EPO website, and there is no "click thru" license agreement addressing who would assume liability on further downstream use and control of the ASTM intellectual property.

If DOW wishes to assume responsibility to include lost revenues incurred by ASTM from such free posting, we can arrange with DOW and the EPO to have posted on this site a cover page of the standard with the abstract and metadata, and a link whereby any individual who needs a copy may obtain the pdf version via a click thru agreement, and the resulting pdf standard version download will come directly from the ASTM server. For such downloads, ASTM would keep record and charge DOW on all copies downloaded on a monthly basis until the arrangement was officially terminated.

If you wish to pursue this arrangement, we will be more than willing to cooperate and work with you.

Best Regards-
John Pace

John Pace
Vice President, Publications and Marketing
ASTM International
610-832-9632
jpace@astm.org

From: Van Buren, Frederik (FR) [mailto:FRVANBUREN@dow.com]

Sent: Wednesday, March 18, 2009 12:37 PM

To: Hooper, Kathe

Subject: RE: Question related to copyright

Dear Mrs. Hooper,

Your refusal is regrettably difficult to accept for us. Therefore I will provide you with some additional explanation on the factual situation.

We as an opponent in an European patent opposition are obliged to provide the documents mentioned in our notice of opposition as a hardcopy. Otherwise the opposition board of the European Patent Office will not consider the document. So this is one of the responsibilities of Dow in an European Patent Opposition.

As mentioned before the documents are placed by the European Patent Office on a public website (European patent oppositions are essentially of public nature). However, the following is explicitly mentioned at this section of the EPO website (section in red by me):

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The Online File Inspection service gives users access to the information contained in the European Patent Office (EPO) databases connected to the service. The EPO cannot assume liability for the correctness, completeness or quality of the information thus accessed, nor can it guarantee that it is up to date. Documents viewed via this service, particularly non-patent literature items, may be subject to copyright. Before copying or using such documents in other electronic or printed publications, it is up to users of the Online Public File Inspection service to check whether the permission of the author, publisher or other right holder is required. Where no third-party rights exist or are affected, the EPO gives permission for the information retrieved to be reproduced together with an indication of the source, provided that the content is correctly reproduced.

So the EPO has explicitly included this copyright notice.

The step of submitting supporting information by the opponent at the EPO is uncoupled from the responsibilities of the EPO and visitors of this section of the EPO website. The copyright aspects of downloading information from the website of the EPO have been addressed by the EPO.

I hope this additional information will allow you to provide me with information how to obtain your permission for supplying the EPO with the necessary copy of the ASTM standard. Please do not hesitate to contact me if you would like to have additional information.

Kind regards,

Frits van Buren

Dr. F.R. van Buren
Intellectual Capital Management
PTC-1 / 439 building - office 103
Dow Benelux B.V.
P.O. Box 48
4530 AA Terneuzen
The Netherlands
T + 31 115 672372 - F + 31 115 673315
frvanburen@dow.com
Handelsregisternr. 24104547

From: Hooper, Kathe [<mailto:khooper@astm.org>]
Sent: Monday, March 16, 2009 8:14 PM
To: Van Buren, Frederik (FR)
Subject: RE: Question related to copyright

Dear Mr. van Buren:

This is in response to your email of 12 March (copy below).

We are unable to grant permission as ASTM policy does not permit the posting of ASTM standards on public websites.

Kindest regards,

Kathe Hooper (Mrs.)
ASTM International
100 Barr Harbor Drive, PO Box C700
West Conshohocken, PA 19428-2959
phone: 610-832-9634
fax: 610-832-9635

JA1836

ASTM095361

From: Van Buren, Frederik (FR) [mailto:FRVANBUREN@dow.com]
Sent: Thursday, March 12, 2009 10:43 AM
To: Custserv
Subject: Question related to copyright

Dear Mrs. or Mr.,

March 03, 2009 a colleague of me (J. Kirsting - Dow Chemical - USA) ordered standard ASTM 1238 - 85 from IHS.

On this standard it is mentioned:

Copyright ASTM International

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No reproduction or networking permitted without license from IHS.

and

Sold to: Dow Chemical, 01742693

Not for resale, 2009/3/3 20:57:9 GMT

For an European patent opposition we need to file a hardcopy of this standard at the European Patent Office (EPO) in Munich in Germany. The documents filed at an opposition are placed on a public section of the website of the EPO as pdf files. There they can be read and downloaded.

I would like to have your permission for filing a copy of this standard at the European Patent Office in Munich.

I first submitted this question at IHS, but they referred to you for further information.

Kind regards,

Frits van Buren

Dr. F.R. van Buren

Terneuzen Intellectual Capital Management

PTC-1 / 439 building - office 103

Dow Benelux B.V

P.O. Box 48

4530 AA Terneuzen

The Netherlands

T + 31 115 672372 - F + 31 115 673315

frvanburen@dow.com

Handelsregisternr. 2410454

EXHIBIT 131

From: Hooper, Kathe </O=ASTM/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=KHOOPER>
Sent: Thursday, July 9, 2009 3:33 PM
To: 'Victor Palacios' <vic_3@hotmail.com>
Subject: RE: Request (nao)

Dear Mr. Palacios:

Thank you for all your email and the information provided.

After further review of your request, ASTM is unable to grant permission to reproduce ASTM standards B584 and B208 in your thesis. You may reference the standards (by designation number and title) and refer readers to the ASTM website (www.astm.org) where they may purchase the standards.

Thank you for your interest in ASTM standards.

Kind regards,

*Kathe Hooper
ASTM International
100 Barr Harbor Drive, PO Box C700
West Conshohocken, PA 19428-2959
phone: 610-832-9634
fax: 610-832-9635
email: khooper@astm.org*

From: Victor Palacios [mailto:vic_3@hotmail.com]
Sent: Wednesday, July 08, 2009 5:38 PM
To: Hooper, Kathe
Subject: RE: Request (nao)

Dear Mrs. Kathe Hooper:

My mailing address is:

"Talleres Unidos Cevallos"
Eloy Alfaro 1702 y Argentina
Guayaquil, Ecuador
Postal Code: EC090101

Please be so kind to let me know the fees I need to cancel and all the information about the money transfer.
Thank you very much for all your help.
Kind regards,

Victor Palacios

De: Hooper, Kathe [<mailto:khooper@astm.org>]
Enviado el: miércoles, 08 de julio de 2009 15:28
Para: Victor Palacios
Asunto: RE: Request (nao)

Dear Victor,

Please send your complete mailing address for the license agreement.

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Kind regards,

*Kathe Hooper
ASTM International
100 Barr Harbor Drive, PO Box C700
West Conshohocken, PA 19428-2959
phone: 610-832-9634
fax: 610-832-9635
email: khooper@astm.org*

From: Victor Palacios [mailto:vic_3@hotmail.com]
Sent: Monday, July 06, 2009 4:54 PM
To: Hooper, Kathe
Subject: RE: Request (nao)

Dear Mrs. Kathe Hooper:

The digital copies will be delivered in CD-ROM.

Thanks for your help.

Victor Palacios

De: Hooper, Kathe [mailto:khooper@astm.org]
Enviado el: lunes, 06 de julio de 2009 14:52
Para: Victor Palacios
Asunto: RE: Request (nao)

Dear Mr. Palacios,

Thank you for your response. I have an additional question regarding the digital copies (PDF). How will you deliver the PDF files (i.e. CD-ROM, DVD?)

Thank you.

Kind regards, Kathe

*Kathe Hooper
ASTM International
100 Barr Harbor Drive, PO Box C700
West Conshohocken, PA 19428-2959
phone: 610-832-9634
fax: 610-832-9635
email: khooper@astm.org*

From: Victor Palacios [mailto:vic_3@hotmail.com]
Sent: Monday, July 06, 2009 2:27 PM
To: Hooper, Kathe
Subject: RE: Request (nao)

Dear Mrs. Kathe Hooper:

I need to make 1 original document (printed), 3 printed copies and two digital copies (in pdf format as part of the thesis so it can't be reproduced), that's 4 printed copies and two digital copies. These documents will be distributed as follows:

1 copy stays with the thesis director,

1 copy and 1 original digital copy for the Mechanical Engineering library

1 original, 1 copy and 1 original digital copy for the Central Campus Library

I hope this information is the one you need, thanks in advance for all your help,

Victor Palacios

De: Hooper, Kathe [mailto:khooper@astm.org]

Enviado el: lunes, 06 de julio de 2009 10:24

Para: vic_3@hotmail.com

Asunto: RE: Request (nao)

Dear Mr. Palacios:

This is in regard to your email of 1 July (copy below).

Before we can proceed with your request to include ASTM standards B584 and B208 in your thesis, we will need to know how many printed copies of your thesis will be made and distributed. Once we receive this information, we will be happy to send a license agreement outlining the fees and conditions involved.

Please note that ASTM policy requires a fee for the rights to reproduce and distribute printed copies of ASTM standards. Also, ASTM does not permit the posting of ASTM standards on public websites or the distribution of the PDF files.

Thank you for your interest in ASTM standards.

Kind regards,

Kathe Hooper (Mrs.)

ASTM International

100 Barr Harbor Drive, PO Box C700

West Conshohocken, PA 19428-2959

phone: 610-832-9634

fax: 610-832-9635

email: khooper@astm.org

From: Naouri, Sarah

Sent: Thursday, July 02, 2009 9:21 AM

To: Hooper, Kathe

Cc: srvcout

Subject: FW: Request (nao)

Hi Kathe,

Sorry for all the emails today! Would the below permission request be something you handle? Please advise. Thank you.

Best Regards,

Sarah Naouri

ASTM International

Customer Relations Representative

JA1841

ASTM095375

From: Custserv
Sent: Thursday, July 02, 2009 8:45 AM
To: Naouri, Sarah
Subject: FW: Request

From: Victor Palacios [mailto:vic_3@hotmail.com]
Sent: Wednesday, July 01, 2009 3:46 PM
To: Custserv
Subject: Request

Greetings,

My name is Victor Palacios, I'm from Ecuador and I bought two standards: B584 and B208 through a friend's credit card (Jose Eduardo Rossel) two years ago (approximately). I'm making a thesis for my degree in Mechanical Engineering. The thesis is about the fabrication of copper alloy casting C86500 according to the ASTM Standard B584 for marine applications. The reason I write this email is because I would like your authorization to use these standards as annex documents in the thesis. Obviously I can't publish them without your authorization.

As I said, my name is Victor Palacios Cevallos, the university I studied is Escuela Superior Politecnica del Litoral (ESPOL), my thesis director is Ignacio Wiesner Falconi (email: iwiesner@espol.edu.ec), Mech. Eng. The university's web page is www.espol.edu.ec, the faculty's web page is www.fimcp.espol.edu.ec.

If there is a formal procedure of doing this, please let me know.

Thanks in advance,

Victor Palacios

EXHIBIT 132

Register My Account

E-Mail address:	<input type="text"/>
Select Password:	<input type="password"/>
Confirm Password:	<input type="password"/>

REGISTER MY ACCOUNT

Password Note: Please use only letters A(a)-Z(z) and numbers 0-9. Do not use any punctuation marks, formatting, spacing, or non-letters (periods, commas, etc.). Your password must be at least 6 characters long.

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EXHIBIT 133

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EXHIBIT 134

Reading Room

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EXHIBIT 135

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series with the fluid flow, such as expansion tanks, fill lines, chemical feeders, and drains.

plenum: a compartment or chamber to which one or more ducts are connected, that forms a part of the air distribution system, and that is not used for occupancy or storage. A plenum often is formed in part or in total by portions of the building.

pool: any structure, basin, or tank containing an artificial body of water for swimming, diving, or recreational bathing. The term includes, but is not limited to, swimming pool, whirlpool, spa, and hot tub.

power roof/wall ventilators (PRV): a fan consisting of a centrifugal or axial impeller with an integral driver in a weather-resistant housing and with a base designed to fit, usually by means of a curb, over a wall or roof opening.

power usage effectiveness (PUE): computer room energy divided by IT equipment energy calculated in accordance with industry-accepted standards (see Informative Appendix E).

power usage effectiveness—category 0 (PUE_0): peak electric demand (kW) for the entire computer room, including IT equipment and supporting infrastructure, divided by peak electric demand (kW) of the IT equipment.

power usage effectiveness—category 1 (PUE_1): annual energy consumption (kWh) for the entire computer room, including IT equipment and supporting infrastructure, divided by annual energy consumption (kWh) of the IT equipment.

purchased energy rates: costs for units of energy or power purchased at the building site. These costs may include energy costs as well as costs for power demand as determined by the adopting authority.

R-value: see *thermal resistance*.

radiant heating system: a heating system that transfers heat to objects and surfaces within the heated space primarily (greater than 50%) by infrared radiation.

rated motor power: see *motor power, rated*.

rated R-value of insulation: the thermal resistance of the insulation alone as specified by the manufacturer in units of $\text{h}\cdot\text{ft}^2\cdot^\circ\text{F}/\text{Btu}$ at a mean temperature of 75°F . Rated R-value refers to the thermal resistance of the added insulation in framing cavities or insulated sheathing only and does not include the thermal resistance of other building materials or air films. (See *thermal resistance*.)

rating authority: the organization or agency that adopts or sanctions use of this rating methodology.

readily accessible: capable of being reached quickly for operation, renewal, or inspection without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc. In public facilities, accessibility may be limited to certified personnel through locking covers or by placing equipment in locked rooms.

recirculating system: a domestic or service hot-water distribution system that includes a closed circulation circuit designed to maintain usage temperatures in hot-water pipes



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PUBLIC COMMENT STAGE

Public Comment Submission Closing Date: June 26, 2013

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Welcome DEBRA BAKI

NFPA 70E®, Standard for Electrical Safety in the Workplace®, 2012 Edition

For First Draft Report

My Public Comment

Table of Contents: NFPA 70E

- Introduction
- Chapter 1 Safety-Related Work Practices
- Chapter 2 Safety-Related Maintenance Requirements
- Chapter 3 Safety Requirements for Special Equipment
- Informative Annex A Referenced Publications
- Informative Annex B Informational References
- Informative Annex C Limits of Approach
- Informative Annex D Incident Energy and Arc Flash Boundary Calculation Methods
- Informative Annex E Electrical Safety Program
- Informative Annex F Hazard Analysis, Risk Estimation, and Risk

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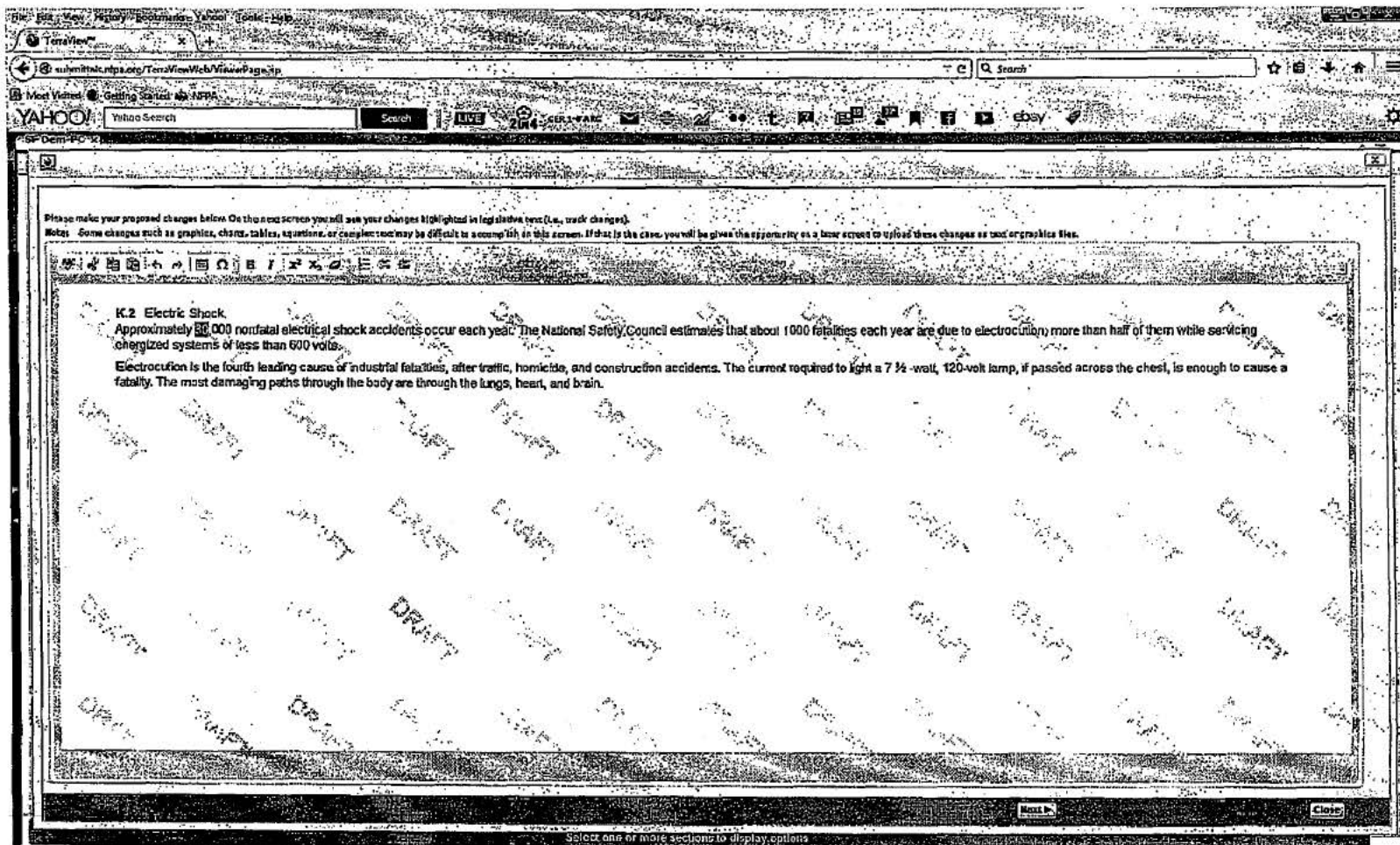
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NFPA 70E®, Standard for Electrical Safety in the Workplace®, 2012 Edition

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- Informative Annex C Limits of Approach
- Informative Annex D Incident Energy and Arc Flash Boundary Calculation Methods
- Informative Annex E Electrical Safety Program
- Informative Annex F Hazard Analysis, Risk Estimation, and Risk Evaluation Procedure
- Informative Annex G Sample Lockout/Tagout Procedures
- Informative Annex H Guidance on Selection of Protective Clothing and Other Personal Protective Equipment
- Informative Annex I Job Briefing and Planning Checklist
- Informative Annex J Energized Electrical Work Permits
- Informative Annex K General Categories of Electrical Hazards
- Informative Annex L Typical Application of Safeguards in the Cell Line Working Zone
- Informative Annex M Layering of Protective Clothing and Total System Arc Rating
- Informative Annex N Example Industrial Procedures and Policies for Working Near Overhead Electrical Lines and Equipment

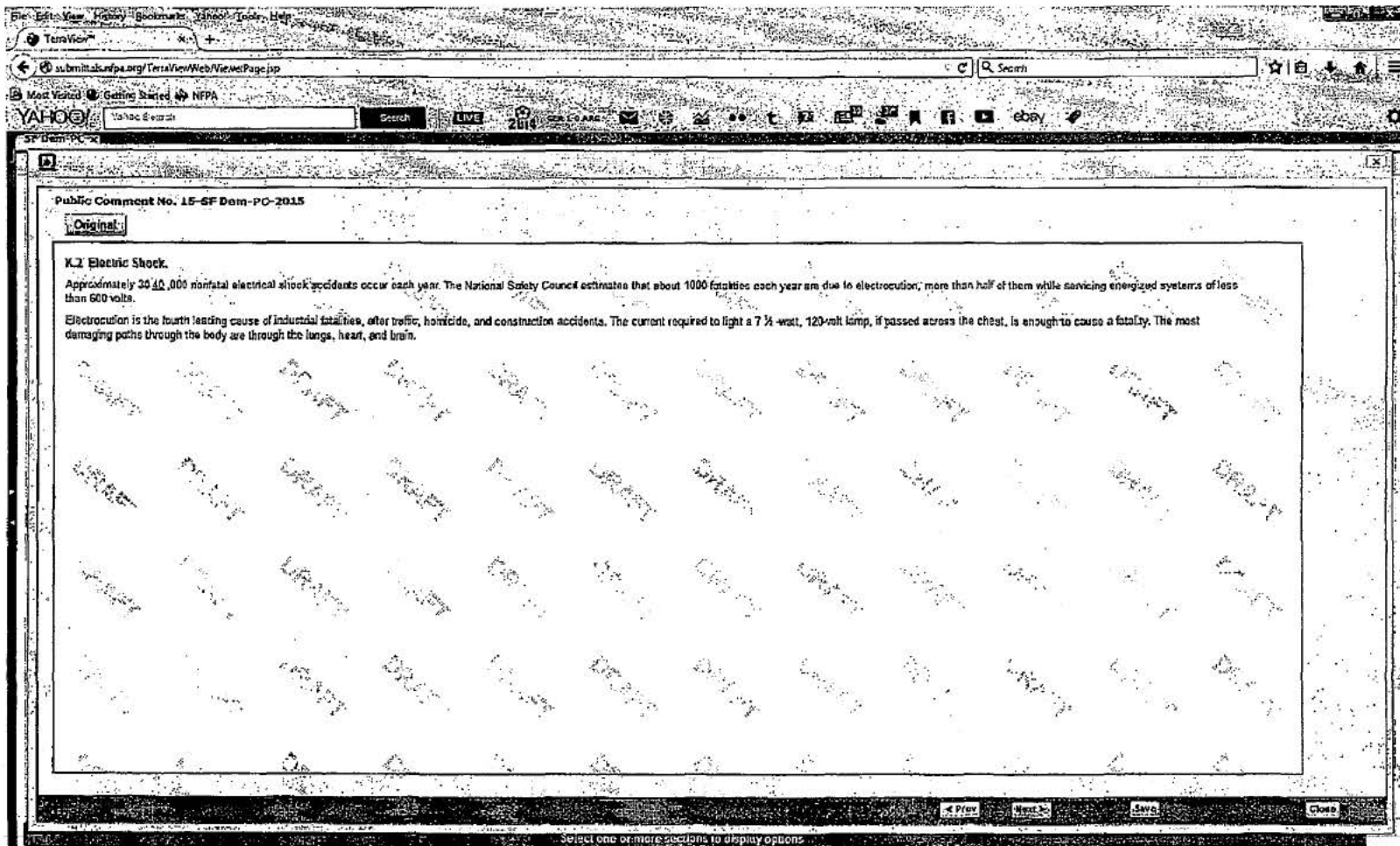
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- Informative Annex K General Categories of Electrical Hazards**
 - K.1 General Categories.**
There are three general categories of electrical hazards: electrical shock, arc flash, and arc blast.
 - K.2 Electric Shock.**
Approximately 30,000 nonfatal electrical shock accidents occur each year. The National Safety Council estimates that about 1800 fatalities each year are due to electrocution, more than half of them while servicing energized systems of less than 600 volts.
Electrocution is the fourth leading cause of industrial fatalities, after traffic, homicide, and construction accidents. The current required to light a 75-watt, 120-volt lamp, if passed across the chest, is enough to cause a fatality. The most damaging path through the body are through the lungs, heart, and brain.
 - K.3 Arc Flash.**
When an electric current passes through air between ungrounded conductors or between ungrounded conductors and grounded conductors, the temperatures can reach 35,000°F. Exposure to these external temperatures both burns the skin directly and causes ignition of clothing, which adds to the burn injury. The majority of hospital admissions due to electrical accidents are from arc flash burns, not from shocks. Each year more than 2500 people are admitted to burn centers with severe arc flash burns. Arc flashes can and do kill at distances of 3 m (10 ft).
 - K.4 Arc Blast.**
The tremendous temperatures of the arc cause the explosive expansion of both the surrounding air and the metal in the arc path. For example, copper expands by a factor of 67,000 times when it turns from a solid to a vapor. The danger associated with this expansion is one of high pressures, sound, and shrapnel. The high pressures can easily exceed hundreds or even thousands of pounds per square foot, knocking workers off ladders, rupturing eardrums, and collapsing lungs. The sounds associated with these pressures can exceed 160 dB. Finally, material and molten metal is expelled away from the arc at speeds exceeding 1600 km/hr (700 mph), fast enough for shrapnel to completely penetrate the human body.



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This site does not link to or contain standards incorporated by reference into the CFR.

If you are interested in obtaining a copy of a standard that has been incorporated by reference, contact the standards organization that developed the material.

Who to Contact

For more information about a standard:

1. Use the contact information contained in the regulation to:

- Contact the agency that issued the regulation containing the IBR standard.
- Contact the standards organization that developed and published the material.

Some standards organizations have online reading rooms that are free to the public, to registered users, or to organization members. Some of the standards incorporated by reference may be accessible at these standards organization web sites:

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Some service information incorporated by reference in airworthiness directives may be available online.

2. You can also find agency phone numbers and other contact information at:

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- [United States Government Manual](#)
- [Federal Citizen Information Center, National Contact Center](#)

3. You may also use the NIST database, [Regulatory Standards Incorporated by Reference](#), for information on the availability of IBR standards.

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Incorporation by reference (IBR) allows Federal agencies to comply with the requirement to publish rules in the *Federal Register* and the *Code of Federal Regulations* (CFR) by referring to materials already published elsewhere.

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Why is Incorporation by Reference Used?

Incorporation by reference is used primarily to make privately developed technical standards Federally enforceable. Agency generated documents are presumptively ineligible for incorporation by reference because that material can and should be published in full text in the *Federal Register* and CFR. Agencies are not authorized to incorporate by reference material on their web sites as a substitute for *Federal Register* publication.

The legal effect of incorporation by reference is that the material is treated as if it were published in the *Federal Register* and CFR. This material, like any other properly issued rule, has the force and effect of law. Congress authorized incorporation by reference in the Freedom of Information Act to reduce the volume of material published in the *Federal Register* and CFR. (See 5 U.S.C. 552(a) and 1 CFR part 51). Congress gave complete authority to the Director of the Federal Register to determine whether a proposed incorporation by reference serves the public interest.

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In most cases, materials incorporated by reference are made available through the standards organization that developed the standard. Contact the standards organization or other designated sources through the address listed in the *Federal Register* or CFR.

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1. Submit your written request at least a day in advance.
2. Your request must include:
 - Your name and daytime contact information—so we can confirm your appointment and the availability of the material you are seeking or in case we have questions,
 - A detailed description of the material you wish to examine, and
 - The date and time you wish to examine the materials.

3. Submit your request by:

 **E-mail** fedreg.legal@nara.gov

 **U.S. Mail** addressed to:

Office of the Federal Register (NF)
The National Archives and Records Administration
8601 Adelphi Road
College Park, MD 20740-6001

** Note that our mailing address differs from our physical location.
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The collection of materials incorporated by reference in Titles 1 through 50 of the CFR has grown to

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the point that they are transferred from OFR to other NARA sites on a regular basis. See the [Disposition Schedule](#) below for more information on where materials are housed and use the links for these facilities to learn about researcher and information access policies at those locations.

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Disposition Schedule and Location

The following table is a listing of the disposition schedule and location of the materials incorporated by reference:

- The dates and timeframes are approximate
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State Implementation Plans and Amendments submitted to EPA (40 CFR part 52)	From Year 0-5	From Year 5-15	From Year 15 Forward (permanent storage)
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Addresses

These are the addresses of the locations listed in the table above. Please call 202-741-6030 for help in determining where the materials are housed:

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Washington, DC 20001

Washington National Records Center (WNRC)

4205 Suitland Road
Suitland, MD 20746-8001

National Archives at College Park (NARA)

8601 Adelphi Road
College Park, MD 20740-6001

If you are interested in obtaining a copy of a standard that has been incorporated by reference, contact the standards organization that developed the material or the agency that incorporated it.

If you are interested in examining material that has been incorporated by reference, submit a written request to the Office of the Federal Register.

For more information about Incorporation by Reference, please contact our Legal Affairs and Policy Staff:

[Contact the Standards Organization or Agency](#)



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EXHIBIT 1

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR : NO.
TESTING AND MATERIALS : 1:13-cv-01215-TSC-
d/b/a ASTM : DAR
INTERNATIONAL; :
NATIONAL FIRE :
PROTECTION :
ASSOCIATION, INC.; :
and AMERICAN SOCIETY :
OF HEATING, :
REFRIGERATION, AND :
AIR CONDITIONING :
ENGINEERS, :
Plaintiffs :
vs. :
PUBLIC.RESOURCE.ORG, :
INC., :
Defendant :

Videotaped deposition of JOHN C.
JAROSZ taken at the law offices of Veritext
Legal Solutions, 1250 I Street NW,
Washington, DC, commencing at 10:09 a.m.
THURSDAY, AUGUST 27, 2015, before Debbie
Leonard, Registered Diplomate Reporter,
Certified Realtime Reporter.

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1 it.
2 Objection to form. You're
3 asking him to recall, without having
4 all the materials in front of him?
5 MR. BRIDGES: Yeah.
6 MR. FEE: Okay.
7 THE WITNESS: It's all laid out
8 in my report, and the sources are
9 provided in my report. I've not
10 memorized all those.
11 BY MR. BRIDGES:
12 Q. But I don't think your report
13 refers to upside-down materials, does it?
14 A. I don't recall for sure, but I
15 thought some of the documents that I cited
16 make reference to those materials. I'm not
17 sure that I cited the, for instance,
18 upside-down materials, but I think I have
19 discussions about that phenomenon.
20 Q. With whom?
21 A. In written materials that I've
22 cited.
23 Q. Have you had oral discussions
24 about what you have referred to as that
25 phenomenon?

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1 A. Yes.
2 Q. With whom?
3 A. Counsel here.
4 Q. With anybody else?
5 A. I don't think so. It's
6 possible, but I'm not recalling anything
7 else.
8 Q. And when you say discussions
9 with "counsel here," you're referring to the
10 counsel at the table here today at the
11 deposition?
12 A. Correct.
13 And we should add to that
14 Jordana Rubel, who's been a person that I've
15 had conversations with over the last several
16 months.
17 Q. What did you do to verify any
18 of the statements to you from counsel about
19 these facts you've referred to about the
20 materials that the defendant has
21 disseminated?
22 A. I don't think I did separate
23 verification. I may have seen some documents
24 that provide or provided confirmation of that
25 fact, but I don't recall separately going out

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1 beyond the document production to verify that
2 information.
3 Q. But you don't recall seeing any
4 defective materials yourself, correct?
5 A. That's correct. I do not.
6 Q. You just relied upon the word
7 of others, correct?
8 MR. FEE: Objection. Vague.
9 Mischaracterizes his testimony.
10 THE WITNESS: I relied upon
11 written documents I saw and
12 conversations that I had.
13 BY MR. BRIDGES:
14 Q. What written documents did you
15 see that discussed these issues?
16 MR. FEE: Objection. Asked and
17 answered.
18 THE WITNESS: And I'm sorry. I
19 can't point you to the particular
20 ones. Perhaps, through the course of
21 the day, my memory will be refreshed
22 on that.
23 BY MR. BRIDGES:
24 Q. If you relied upon those
25 written documents, would you have cited to

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1 those written documents in your report?
2 A. Perhaps.
3 Q. Why do you say "perhaps"?
4 A. I can't say with absolute
5 certainty what I do. But often, if something
6 is a direct support for a factual
7 observation, I will often cite that source,
8 but not always.
9 Q. What previous -- strike that.
10 What training or education have
11 you ever received with respect to standards
12 development organizations?
13 MR. FEE: Objection to form.
14 THE WITNESS: I don't recall if
15 I've had a course in standard
16 development. Probably it has been
17 part of some of the economics courses
18 that I've taken over the years.
19 In my profession and the work
20 that I've done in the last 30 years,
21 I've had occasion to look at and
22 evaluate standards organizations and
23 the output from those organizations.
24 So it is among the topics that
25 I've investigated in the course of my

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<p>1 consulting career.</p> <p>2 BY MR. BRIDGES:</p> <p>3 Q. In what context?</p> <p>4 A. There have been several matters</p> <p>5 I've had, litigations, that have involved</p> <p>6 standard setting organizations and the</p> <p>7 outputs from those organizations.</p> <p>8 Q. What organizations?</p> <p>9 A. Well, some that come to mind</p> <p>10 are ETSI, IEEE, the Blu-ray Association,</p> <p>11 MPEG, MPEG L.A., the Philips 6C and Philips</p> <p>12 3C organizations. Those are among the ones</p> <p>13 that come to mind.</p> <p>14 Q. And what types of litigation</p> <p>15 did your work relating to those standard</p> <p>16 setting organizations involve?</p> <p>17 MR. FEE: Objection to form.</p> <p>18 THE WITNESS: It was almost all</p> <p>19 intellectual property litigation, with</p> <p>20 probably the bulk of the analyses</p> <p>21 undertaken with regard to patent</p> <p>22 rights.</p> <p>23 BY MR. BRIDGES:</p> <p>24 Q. Do you recall --</p> <p>25 A. I guess I should -- there were</p> <p>Page 26</p>	<p>1 standards development organization that</p> <p>2 you've worked on?</p> <p>3 A. Again, I'd have to go back and</p> <p>4 look at my records. I can't right now recite</p> <p>5 any, but there very well could be one or</p> <p>6 more.</p> <p>7 Q. Did you review any of your work</p> <p>8 in -- from earlier copyright cases involving</p> <p>9 standards development organizations in</p> <p>10 connection with your work in this case?</p> <p>11 A. Not to the best of my memory,</p> <p>12 no.</p> <p>13 Q. What background do you have in</p> <p>14 the creation of standards by standard</p> <p>15 development organizations?</p> <p>16 MR. FEE: Objection to form.</p> <p>17 THE WITNESS: In the context of</p> <p>18 some of my consulting assignments, I</p> <p>19 have examined processes undertaken by</p> <p>20 SDOs.</p> <p>21 BY MR. BRIDGES:</p> <p>22 Q. Anything else?</p> <p>23 A. Nothing else comes to mind.</p> <p>24 I've certainly looked at the output</p> <p>25 associated with those processes, but there's</p> <p>Page 28</p>
<p>1 probably some breach of contract matters as</p> <p>2 well.</p> <p>3 Q. Did you work on any matters</p> <p>4 involving copyright law where you became</p> <p>5 familiar with the work and outputs of</p> <p>6 standards setting organizations before this</p> <p>7 case?</p> <p>8 A. Probably, but I cannot say that</p> <p>9 with absolute certainty. I've been involved</p> <p>10 in several matters over a course of many</p> <p>11 years.</p> <p>12 Q. Can you name any copyright</p> <p>13 matter involving a standards development</p> <p>14 organization that you recall?</p> <p>15 A. Not now, without going back and</p> <p>16 looking at my records.</p> <p>17 Q. Would they be listed in the</p> <p>18 cases attached to Exhibit 1?</p> <p>19 A. That would summarize some of my</p> <p>20 records. The cases that are embodied in my</p> <p>21 tab 1 are those that led to deposition or</p> <p>22 trial testimony. I've been involved in many</p> <p>23 matters beyond those.</p> <p>24 Q. But sitting here, you cannot</p> <p>25 recall any copyright case involving a</p> <p>Page 27</p>	<p>1 nothing else that comes to mind.</p> <p>2 Q. What processes undertaken by</p> <p>3 standards development organizations did you</p> <p>4 examine?</p> <p>5 MR. FEE: Objection. Are you</p> <p>6 asking prior to the report still?</p> <p>7 MR. BRIDGES: Yes.</p> <p>8 MR. FEE: Okay.</p> <p>9 THE WITNESS: I'm not quite --</p> <p>10 MR. BRIDGES: Or other than in</p> <p>11 this case.</p> <p>12 MR. FEE: Okay.</p> <p>13 THE WITNESS: I'm not quite</p> <p>14 sure what you're asking. I've seen</p> <p>15 discussion of the some of the</p> <p>16 processes of various organizations.</p> <p>17 I'm not -- I'm not quite sure what</p> <p>18 you're asking. Perhaps you could ask</p> <p>19 it somewhat differently.</p> <p>20 BY MR. BRIDGES:</p> <p>21 Q. Well, no. You said, quote, "I</p> <p>22 have examined processes undertaken by SDOs."</p> <p>23 So my question is, what</p> <p>24 processes undertaken by standards development</p> <p>25 organizations did you examine?</p> <p>Page 29</p>

<p>1 A. It sounds like the same 2 question to me. 3 Q. Specifically, what processes 4 did you examine? 5 A. That still sounds like the same 6 question, but let me try to answer it by 7 saying I've looked, for instance, at the 8 mechanisms that ETSI undertook in developing 9 standards. So I am familiar generally with 10 the processes that it follows. Similarly 11 with regard to other standard setting 12 organizations. 13 Q. What other standard setting 14 organizations? 15 A. Well, I think I identified 16 those a few moments ago. Do you want me to 17 repeat those? 18 Q. Well, if -- are you saying 19 that, for all of those organizations, you 20 examined their processes? 21 A. In some dimension, probably for 22 most of the organizations, I had at least 23 some knowledge of the process. I can't say 24 that I investigated in depth all of the 25 processes for all of the organizations that</p> <p style="text-align: right;">Page 30</p>	<p>1 manufacturers only. Others include a wider 2 array of companies. 3 In all instances, though, the 4 companies are trying to -- the standards 5 setting organizations are trying to develop 6 at least some form of consensus -- sometimes 7 it's very broad consensus; sometimes it's 8 more narrow consensus -- about what would be 9 good for that standards setting organization. 10 Sometimes the SSOs are 11 interested in what's best for the 12 manufacturers and the ability for them to 13 supply in an interoperable environment. In 14 some cases, the SSOs are very alert to the 15 needs of consumers and users of products and 16 services that comply with standards. 17 Q. You've distinguished between 18 standards setting organizations and standard 19 development organizations. What is the 20 distinction that you -- that you identify 21 between the two? 22 A. I think I said I didn't know if 23 there is for sure a distinction, but I think 24 an SSO is perhaps a broader concept than an 25 SDO, but I might be wrong on that.</p> <p style="text-align: right;">Page 32</p>
<p>1 have been involved in my consulting 2 assignments that are standards oriented. 3 Q. What do you recall about your 4 investigation of the processes by which 5 standards development organizations create 6 their standards? 7 A. I should say I -- SDO is 8 probably not the right term to use. I should 9 probably say standards setting organizations. 10 There may be a distinction between an SSO and 11 an SDO. 12 But, generally, each SSO has a 13 process that's unique to its organization. 14 Some solicit input from a wide range of 15 constituents; some from a more narrow range. 16 The ones that I have examined 17 have all been fairly careful in the work that 18 they've done, seeking input at many steps 19 along the way. 20 Some organizations, like SDOs 21 at issue here, seek a broader array of inputs 22 than do others. 23 Some organizations, standards 24 setting organizations, include primarily or 25 only manufacturers and sometimes large</p> <p style="text-align: right;">Page 31</p>	<p>1 I know the companies -- I -- 2 the plaintiffs here are SDOs. The 3 associations are, among other things, in the 4 business of creating and developing 5 standards. 6 There could be other SSOs that 7 have different constituents that are of 8 interest to them. I don't know for sure that 9 an SSO is a broader concept than an SDO, but 10 it could be. 11 Q. What do you understand to be 12 the constituents of the plaintiffs in this 13 case? 14 MR. FEE: Objection to form. 15 THE WITNESS: I laid that out 16 in my report. In summary, I believe 17 they try to include in the process 18 both those -- both supply-side 19 entities and demand-side entities. 20 BY MR. BRIDGES: 21 Q. Who else are plaintiffs' 22 constituents? 23 MR. FEE: Same objection. 24 THE WITNESS: I can't think of 25 anything that doesn't fall within</p> <p style="text-align: right;">Page 33</p>

1 Q. So those would be harms caused
2 by a court decision?
3 MR. FEE: Same objection.
4 THE WITNESS: By continuing
5 activities by the defendant that are
6 not halted by the Court.
7 BY MR. BRIDGES:
8 Q. Well, it comes across, frankly,
9 in your report as though you're identifying
10 harms that would flow from a court decision.
11 MR. FEE: Objection.
12 BY MR. BRIDGES:
13 Q. Is that correct or not?
14 A. No, I think you --
15 MR. FEE: Mischaracterizes the
16 report.
17 THE WITNESS: -- you misread
18 it. I don't think I said that or
19 meant to say that.
20 BY MR. BRIDGES:
21 Q. So what harms have occurred
22 from the -- from the defendant's conduct to
23 date?
24 A. At the risk of repeating
25 myself, some of that is summarized in

Page 66

1 paragraph 133, with regard to tangible
2 evidence on harm. With regard to other
3 evidence, it's throughout the report.
4 Q. So why would it make a
5 difference to what the defendant's harms
6 are -- strike -- strike that.
7 Why would it make a defendants
8 [sic] to the plaintiffs' harms if the
9 plaintiffs' harms were continue with --
10 strike that.
11 Is it your testimony that harms
12 to plaintiffs would be different depending on
13 the particular basis of the Court's ruling?
14 MR. FEE: Objection. Vague.
15 THE WITNESS: I -- I don't
16 understand your question.
17 BY MR. BRIDGES:
18 Q. It looks as though you're
19 stating what the harms would be if the Court
20 found that incorporation by reference would
21 cause the plaintiffs to lose copyright
22 protection; is that correct?
23 A. I don't --
24 MR. FEE: Objection. Vague.
25 THE WITNESS: -- think so. I

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1 think basically what I'm saying is
2 what would -- or addressing, is what
3 would be the harm to the plaintiffs if
4 there's no permanent injunction.
5 BY MR. BRIDGES:
6 Q. Well, what did you mean by
7 "losing copyright protection" in the
8 paragraph -- in the heading VI on page 48?
9 A. In essence, you can think of it
10 as what would happen if there's no permanent
11 injunction. In other words, what the
12 defendant has done in the past and what it's
13 likely to do in the future is allowed to
14 continue.
15 Q. And you immediately go into
16 paragraph 112 talking about Emily Bremer,
17 correct?
18 A. I don't know what you mean by
19 "immediately." It's the first paragraph in
20 Section VI.
21 Q. Right. Was Emily Bremer in the
22 passage you referred to referring to the
23 presence or absence of a permanent injunction
24 in this case?
25 A. I don't think explicitly she

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1 was addressing that issue, no.
2 Q. Do you think implicitly she was
3 referring to this case?
4 A. No. I thought you were asking
5 about permanent injunction. I don't think
6 she was addressing the -- an injunction
7 issue. She was addressing the concept of
8 copyright protection.
9 Q. And that's what you quoted her
10 for, right, was for the concept of copyright
11 protection for standards?
12 MR. FEE: Objection. You're
13 referring just to paragraph 112?
14 BY MR. BRIDGES:
15 Q. You may answer.
16 MR. FEE: Objection to form.
17 THE WITNESS: I -- I don't
18 understand the question.
19 BY MR. BRIDGES:
20 Q. You quoted her in
21 paragraph 112, correct?
22 A. Yes. From one of her two
23 articles, yes.
24 Q. Right. Regarding the concept
25 of copyright protection?

Page 69

1 A. Generally. I think she's
2 talking about standards development and
3 incorporation by reference. I don't remember
4 if she said at the very beginning of the
5 article that it was about copyright
6 protection, but she certainly talks about
7 copyright protection.
8 Q. And you're quoting her about
9 losing copyright protection, and you're
10 placing it in the context of harms of the
11 loss of copyright protection, correct?
12 MR. FEE: Objection to form.
13 THE WITNESS: This excerpt
14 doesn't specifically talk about losing
15 copyright protection, but it talks
16 about the concept of it. If there was
17 no longer copyright protection granted
18 to the SDOs, what would be the
19 repercussions.
20 BY MR. BRIDGES:
21 Q. And that's the context that you
22 identified in the first line of
23 paragraph 112, correct?
24 A. Yes.
25 MR. FEE: Objection to form.

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1 BY MR. BRIDGES:
2 Q. Let me direct your attention to
3 paragraph 35 of your report. It says, "With
4 regard to expansion beyond the specific
5 actions of Public Resource here, the
6 'product' offerings of Public Resource -
7 scans of paper copies of standards with some
8 rekeying of text and some redrawing of
9 diagrams (with some containing errors) -
10 represent a rudimentary first step in the use
11 of Plaintiffs' standards that is likely to
12 become much more sophisticated if the Court
13 holds that third parties are free to use
14 Plaintiffs' standards with impunity after
15 they are incorporated by reference into law."
16 Do you see that?
17 A. Yes, I do.
18 Q. That is your statement,
19 correct?
20 A. Yes.
21 Q. What are the steps that you're
22 envisioning there beyond the rudimentary
23 first step that you identify?
24 A. I think they're laid out in the
25 next sentence.

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1 Q. "Such products" --
2 A. And in the next two sentences.
3 Q. And these are other products
4 that "could include more sophisticated
5 Web-based availability, published
6 compilations of incorporated standards, and
7 other ancillary products that incorporate the
8 standards"; isn't that correct?
9 A. You didn't read that right. It
10 starts "such products could include."
11 Q. Okay. Otherwise, that reading
12 is correct, correct?
13 A. I think so.
14 Q. You consider that to be harm to
15 the plaintiffs?
16 MR. FEE: Objection. Vague.
17 THE WITNESS: It could be, yes.
18 It's likely to be, if the copyright
19 infringement or the assumption of a
20 copyright infringement continues. It
21 could broaden.
22 BY MR. BRIDGES:
23 Q. Right. But the fact that these
24 other types of products would enter the
25 marketplace is part of the harm that you

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1 envision from the defendant in this case?
2 MR. FEE: Objection to form.
3 THE WITNESS: It's potential --
4 there's a potential that the defendant
5 could do that. There's also the
6 potential that other parties could do
7 that.
8 BY MR. BRIDGES:
9 Q. What --
10 A. I don't know for sure what the
11 defendant has in mind.
12 Q. Why did you take into account
13 harms caused by other parties in this case?
14 A. Because --
15 MR. FEE: Objection. Lack of
16 foundation.
17 Go ahead.
18 THE WITNESS: If no copyright
19 protection is allowed here, in other
20 words, there's no permanent
21 injunction, Public Resource and other
22 parties like it will have freedom to
23 do what the plaintiffs believe they
24 should not have freedom to do.
25 BY MR. BRIDGES:

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1 Q. In other words, if the Court
2 makes a decision in a certain way, there will
3 be harms from persons or entities other than
4 Public.Resource.Org to the plaintiffs? Is
5 that your testimony?
6 MR. FEE: Objection to form.
7 THE WITNESS: You used the
8 phrase "in a certain way." I don't
9 know what you mean by that. I'm
10 addressing the issue of whether there
11 should be a permanent injunction or
12 not.
13 BY MR. BRIDGES:
14 Q. So your view is that, if the
15 Court does not enter a permanent injunction,
16 the plaintiffs will suffer harms from parties
17 other than Public.Resource.Org. Is that your
18 testimony?
19 A. That potential exists. I don't
20 know for sure. That's, in part, why the harm
21 is irreparable or very difficult to quantify.
22 Q. The -- what harm?
23 A. Continuing activity of Public
24 Resource and others. I don't know exactly
25 what will happen, but the potential is that

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1 there could be very broad dissemination of
2 the standards, which would impact these SDOs
3 tremendously.
4 Q. What harm would
5 Public.Resource.Org cause to plaintiffs if
6 there is no permanent injunction?
7 A. A permanent injunction would --
8 lack of a permanent injunction would harm the
9 SDOs.
10 Q. That wasn't my question. My
11 question was, what harm would
12 Public.Resource.Org cause to plaintiffs if
13 there is no permanent injunction?
14 A. At the very least, it's
15 associated with its historical dissemination
16 of these standards, and there would be, in
17 essence, a carte blanche for other
18 organizations or individuals to access those.
19 So my expectation is that the
20 dissemination of the materials that have
21 already been disseminated will expand.
22 It could also be the case that
23 Public Resource will undertake further
24 activities that would disseminate either
25 already disseminated standards or other

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1 standards.
2 Q. What further harm would
3 Public.Resource.Org cause to plaintiffs with
4 respect to the standards at issue in this
5 case if no -- if the Court does not
6 permanently enjoin Public.Resource.Org?
7 MR. FEE: Objection to form.
8 THE WITNESS: If there's no
9 permanent injunction, there will, in
10 essence, be a message sent to the
11 marketplace that the standards that
12 have already been disseminated are out
13 there and can be used by others.
14 So right now my expectation is
15 that some number of consumers of the
16 standards have been reluctant or
17 unknowing as to the standards
18 disseminated by Public Resource. Now
19 there will be more knowledge about
20 that and more approval of that
21 activity. That is if there's no
22 permanent injunction.
23 BY MR. BRIDGES:
24 Q. What harms will plaintiffs
25 suffer if the Court rules that the plaintiffs

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1 do not own the copyrights in this case?
2 MR. FEE: Objection. Calls for
3 speculation.
4 THE WITNESS: In essence,
5 you're asking if there's no copyright
6 infringement?
7 BY MR. BRIDGES:
8 Q. No. What harms -- have you
9 identified what harms the plaintiffs would
10 suffer if the Court rules that the plaintiffs
11 do not own the copyrights at issue, that
12 there are no copyrights that the plaintiffs
13 own --
14 MR. FEE: Objection to form.
15 BY MR. BRIDGES:
16 Q. -- at issue in this case?
17 A. I haven't addressed or thought
18 about that issue. There are also, don't
19 forget, trademark issues.
20 Q. I'm asking about copyright, so
21 I ask you to confine your answers to my
22 questions.
23 My question is, what -- you
24 assume for purposes of your analysis that
25 plaintiffs own valid copyrights, correct?

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1 A. I assume that there's copyright
2 infringement. I don't know that I've made an
3 explicit assumption with regard to ownership.
4 Q. And you assume infringement
5 without assuming ownership of the copyrights?
6 A. I haven't made any explicit
7 assumption with regard to ownership. I know
8 that's an issue in this case, but it's well
9 beyond my expertise.
10 Q. So if it turns out that -- do
11 you understand your testimony to have any
12 bearing on whether plaintiffs' standards are
13 copyrightable?
14 MR. FEE: Objection. Calls for
15 speculation.
16 I would instruct you to not
17 disclose any communications you had
18 with counsel that weren't the basis
19 for any of your opinions in this case.
20 You can otherwise answer.
21 THE WITNESS: Could you read
22 that back or ask it again, please?
23 BY MR. BRIDGES:
24 Q. Do you understand your
25 testimony and opinions in this case to have

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1 any bearing on whether plaintiffs' standards
2 are copyrightable?
3 MR. FEE: Same objection and
4 instruction. Plus objection, calls
5 for a legal conclusion.
6 THE WITNESS: I don't know one
7 way or the other. I've not taken on
8 that assignment.
9 BY MR. BRIDGES:
10 Q. Do you understand whether your
11 testimony and opinions in this case are
12 relevant to whether plaintiffs deserve
13 copyright protection in this case?
14 MR. FEE: Objection. Calls for
15 a legal conclusion.
16 And same objection with respect
17 to communications between you and
18 counsel that were not the bases for
19 your opinions or your report.
20 THE WITNESS: I don't know one
21 way or the other. I did not take on
22 that assignment.
23 BY MR. BRIDGES:
24 Q. Do you mean by your analysis
25 and opinions to suggest in any way that

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1 plaintiffs deserve copyright protection for
2 these standards?
3 MR. FEE: Objection to form.
4 THE WITNESS: I don't have an
5 opinion on that one way or the other.
6 I have not thought about that topic.
7 BY MR. BRIDGES:
8 Q. Do you have any expertise in
9 copyright law as a field of law?
10 MR. FEE: Objection. Vague.
11 THE WITNESS: No, I don't have
12 legal expertise. I have expertise in
13 looking at harm associated with
14 copyright infringement.
15 BY MR. BRIDGES:
16 Q. Do you have any expertise with
17 respect to harm caused by invalidation of
18 copyrights?
19 MR. FEE: Same objection.
20 THE WITNESS: I'm not quite
21 sure I'm fully appreciating your
22 question. Again, I'm an expert in the
23 economics of IP protection. One of
24 the areas in which I do work is harm
25 associated with copyright protection.

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1 BY MR. BRIDGES:
2 Q. Have you done any work in this
3 case to quantify what harms plaintiffs would
4 suffer if a court were to rule that they
5 lacked copyright rights in the standards at
6 issue in this case?
7 MR. FEE: Objection to form.
8 Go ahead.
9 THE WITNESS: Not explicitly,
10 to my knowledge.
11 BY MR. BRIDGES:
12 Q. Have you done anything
13 implicitly?
14 MR. FEE: Same objection.
15 THE WITNESS: Not to my
16 knowledge.
17 BY MR. BRIDGES:
18 Q. Have you done any work in this
19 case to analyze the incentives that
20 participants have in the standards
21 development process?
22 MR. FEE: Objection to form.
23 Vague.
24 THE WITNESS: I have in the
25 sense that I've examined the materials

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1 Q. Right. Or approximately
2 \$3 million?
3 A. Are you limiting it just to
4 90.1 or all its standards?
5 Q. Well, that's a good question.
6 What -- what's -- what did you intend the
7 last sentence in paragraph 76 to refer to?
8 All of its standards or 90.1?
9 A. I think it's all of its
10 standards, but we could visit the screenshot
11 from the Web site to confirm that.
12 Q. Okay.
13 A. I -- I could be wrong. I don't
14 think I am, but I could be.
15 Q. Okay. In the previous
16 sentence, you say, "ASHRAE and its volunteer
17 members devoted more than 86,400 man-hours,
18 3,600 hotel nights, and 1,200 round-trip
19 flights as part of the process."
20 And that -- "the process"
21 appears to refer to updating the ASHRAE 90.1
22 standard, correct?
23 A. Yes.
24 Q. When you say "ASHRAE and its
25 volunteer members," and then you give those
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1 statistics, those statistics refer primarily
2 to the man-hours, hotel nights, and
3 round-trip flights of the volunteer members?
4 MR. FEE: Objection. Vague.
5 THE WITNESS: Probably. As
6 opposed to ASHRAE-employed staff.
7 BY MR. BRIDGES:
8 Q. Do you know how much ASHRAE's
9 volunteer members and their employers --
10 strike that.
11 Do you know how much ASHRAE's
12 volunteer members and their employers spent
13 in salaries and disbursements for the
14 man-hours, hotel nights, and round-trip
15 flights that were part of the process of
16 updating the ASHRAE 90.1 standard?
17 A. I don't know, but it -- I would
18 imagine it's a noticeable amount, but I don't
19 know the amount.
20 Q. What would be your best
21 estimate?
22 A. I don't have a best estimate.
23 Q. Would it be probably over
24 \$10 million?
25 MR. FEE: Objection to form.
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1 THE WITNESS: Again, I don't
2 have an estimate.
3 BY MR. BRIDGES:
4 Q. Do you know -- did ASHRAE pay
5 for the time, the hotel bills, and the plane
6 fares of its volunteer members in updating
7 the ASHRAE 90.1 standard?
8 A. I would expect rarely. It's
9 possible that there are certain instances in
10 which there was some set of out-of-pocket
11 expenses covered, but I would imagine the
12 bulk of the time it's the volunteer's
13 employer.
14 MR. BRIDGES: Sorry. How long
15 have we been going? I didn't get when
16 we went back on.
17 MR. FEE: 34 minutes.
18 BY MR. BRIDGES:
19 Q. Did you speak with Emily Bremer
20 at any point in this case?
21 A. No.
22 Q. How did you become acquainted
23 with her writings?
24 A. I think Kevin Fee and/or
25 Jordana Rubel brought to my attention that
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1 she had written on this topic. I don't
2 recall whether then we separately obtained
3 her two articles or Mr. Fee slash Ms. Rubel
4 provided those to us.
5 Q. What independent work did you
6 do to research writings regarding the
7 economics of standards development?
8 MR. FEE: Objection to form.
9 THE WITNESS: We did
10 independent research in the sense that
11 people that work with me did a
12 literature search to determine what
13 writings had been done in the area.
14 I was previously aware of some
15 amount of the scholarship to begin
16 with.
17 BY MR. BRIDGES:
18 Q. How is that literature search
19 reflected in any documents?
20 A. The results are shown in my
21 tab 2, and in particular it is page 2 of my
22 tab 2, at the bottom.
23 Q. And were these items found by
24 you or your team?
25 MR. FEE: Objection to form.
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<p>1 THE WITNESS: Yes, with the 2 exception that, in the first instance, 3 lawyers at Morgan Lewis brought to our 4 attention the Bremer -- the existence 5 of Bremer articles. 6 BY MR. BRIDGES: 7 Q. Did you study any of the 8 materials that Bremer -- strike that. 9 Bremer's articles are law 10 review articles, correct? 11 A. Yes. 12 Q. Did any plaintiff -- did your 13 team's research identify any articles that 14 you chose not to include in tab 2? 15 A. I don't think so. 16 Q. Did any plaintiff or its 17 counsel furnish you with correspondence 18 between the plaintiffs and Emily Bremer for 19 review? 20 A. No, not to my knowledge. 21 Q. How many conversations with 22 representatives of the plaintiffs did you 23 have? 24 MR. FEE: Objection. 25 I would instruct you not to</p> <p>Page 94</p>	<p>1 the various plaintiffs. 2 Q. With whom? 3 A. They are all identified in 4 paragraph 10 of my report. 5 Q. Which of those did you 6 personally have conversations with? 7 A. All of them, as I recall. It's 8 possible there's someone I did not, but I'm 9 not remembering that being the case. 10 Q. Approximately how long did you 11 spend with -- did you have conversations with 12 any of them together? 13 A. Yes, several of them were 14 together. 15 Q. Which ones? 16 A. I don't recall all 17 combinations. I can say with some confidence 18 that there was never more than one plaintiff 19 on a call. In other words, there were 20 several people from a particular plaintiff on 21 a call, but not more than one plaintiff. 22 So I had various combinations 23 of calls with ASTM that may have occurred on 24 three occasions; with NFPA, one or two 25 occasions; and with ASHRAE, one or two</p> <p>Page 96</p>
<p>1 answer questions regarding 2 communications with counsel, unless 3 they formed the basis of your 4 opinions, in which case you can answer 5 questions with respect to those 6 conversations. 7 BY MR. BRIDGES: 8 Q. So I -- I'll change my question 9 slightly. 10 How many -- how many 11 conversations did you have with non-lawyer 12 employees or former employees of the 13 plaintiffs? 14 A. None that the -- that did not 15 include the lawyers. 16 Q. Right. I'm -- so I'm asking 17 you to tell me what they were. If the 18 presence of lawyer -- if you had a 19 conversation with a -- with an employee or 20 former employee of the plaintiff, I'd like to 21 know what that was. So the fact that lawyers 22 may have been present wouldn't excuse it from 23 the scope of the answer. 24 A. I had somewhere between four 25 and six conversations with people who were at</p> <p>Page 95</p>	<p>1 occasions. 2 Q. And approximately how long 3 total did you spend in conversations with 4 representatives of each plaintiff? 5 MR. FEE: Objection to form. 6 THE WITNESS: Cumulatively, 7 somewhere between three and five hours 8 is my best guess right now. 9 BY MR. BRIDGES: 10 Q. When you say cumulative -- 11 "cumulatively," you mean for all plaintiffs? 12 A. Yes. Meaning I'm -- I've added 13 up the conversations I had across all three 14 plaintiffs. 15 Q. Right. What's your best 16 estimate as to the period of time you spent 17 with each plaintiff? 18 A. With ASTM, it may have been two 19 to three hours. For NFPA, one to two hours. 20 For ASHRAE, one to two hours. That's my best 21 guess right now. 22 * * * 23 (Jarosz Exhibit 2 and Jarosz-3 24 marked for identification.) 25 * * *</p> <p>Page 97</p>

<p>1 record at 12:17. This is the end of 2 media unit number 1. 3 * * * 4 (Recess from 12:17 p.m. to 5 12:32 p.m.) 6 * * * 7 THE VIDEOGRAPHER: On the 8 record at 12:32. This is the 9 beginning of media unit 2 in the 10 deposition of John Jarosz. 11 BY MR. BRIDGES: 12 Q. Mr. Jarosz, your report, as I 13 referred to earlier, cites a number of 14 conversations with employees of the 15 plaintiffs. For what purpose did you have 16 conversations with the plaintiffs' employees? 17 A. To learn more about the 18 organization and their view as to the impact 19 of continued copyright protection -- 20 continued copyright infringement and 21 trademark infringement. 22 Q. What view did you learn from 23 them? 24 MR. FEE: Objection to form. 25 THE WITNESS: Well, I solicited</p> <p>Page 110</p>	<p>1 you interview? 2 A. I don't think I interviewed any 3 members of the public either. 4 Q. What steps did you do to 5 ascertain the views of the members of the 6 organizations, other than the employees? 7 A. I read the materials that were 8 produced here. I read the deposition 9 testimony of the various individuals. I read 10 the articles published by Ms. Bremer. And I 11 read the other academic literature and 12 practical literature that I had. 13 Q. Which of those sources stated 14 the views of the non-employee members of the 15 various organizations? 16 A. I don't know that views of -- 17 that their views were explicitly addressed in 18 my report or represented. I understood what 19 the impacts of the lack of honoring the 20 copyrights and trademarks would have, but I 21 don't know that I saw non-employee member 22 views explicitly summarized. 23 Q. So what steps did you do to 24 ascertain the views of the members of the 25 organizations --</p> <p>Page 112</p>
<p>1 and learned many facts about the 2 organizations. I also learned that 3 each one of them viewed continued 4 copyright infringement and trademark 5 infringement as quite detrimental to 6 their organizations, detrimental to 7 the members, detrimental to the 8 public. 9 They viewed continued IP 10 infringement as potentially 11 devastating to their organizations. 12 BY MR. BRIDGES: 13 Q. These were their views? 14 A. Yes. I'm just paraphrasing, of 15 course. 16 Q. What members did you interview? 17 A. None, other than the employees. 18 I don't know if you call those "members" or 19 not. But the volunteer membership, I didn't 20 go to. 21 THE VIDEOGRAPHER: Excuse me. 22 Counsel, could you move your 23 microphone to your lapel? Thank you. 24 BY MR. BRIDGES: 25 Q. What members of the public did</p> <p>Page 111</p>	<p>1 MR. FEE: Objection. 2 BY MR. BRIDGES: 3 Q. -- other than their employees? 4 MR. FEE: Asked and answered. 5 THE WITNESS: Well, I talked to 6 the employees, and they interact with 7 the members on a very regular basis, 8 so they gave me some sense of what the 9 views of the members were. 10 It also could be that some of 11 the perspectives of the members are 12 reflected in some of the documents I 13 identified in tab 2. 14 BY MR. BRIDGES: 15 Q. Well, I'm just trying to find 16 out where -- it sounds as though -- strike 17 that. 18 It sounds as though a minute 19 ago you said you couldn't recall anything 20 specifically calling out views of 21 non-employee members, correct? 22 A. Correct. I think that's right. 23 Q. What did you do to verify the 24 statements that employees of the plaintiffs 25 made about the views of the non-employee</p> <p>Page 113</p>

1 members of their organizations?
2 A. I did what I normally do in an
3 assignment like this and look at the produced
4 materials.
5 Q. And the produced materials did
6 not call out specifically any views of
7 non-employee members of the plaintiff
8 organizations, correct?
9 A. I don't recall any specific
10 views being summarized. My memory may not be
11 perfect on that, though.
12 Q. What research, if any, did you
13 do among members of the public about whether
14 lack of copyright protection for the
15 plaintiffs' standards would be detrimental to
16 the -- to the public?
17 A. The information that I reviewed
18 is in tab 2. I didn't have material beyond
19 what is identified in tab 2.
20 Q. So what in tab 2 reflects your
21 steps to ascertain the views of members of
22 the public?
23 MR. FEE: Objection to form.
24 THE WITNESS: I think the
25 Bremer articles, in part, address

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1 that. I think some of the federal
2 government's circulars that I
3 identify, in part, reflect the
4 reviews, in particular the NTTAA of
5 1995 and OMB Circular A-119. I think
6 they, in part, reflect public views.
7 There are probably other things.
8 BY MR. BRIDGES:
9 Q. Did you review OMB Circular
10 A-119 personally?
11 A. Yes. As I recall, I did.
12 Q. Did you review any materials
13 pertaining to the discussions or
14 deliberations of the Administrative
15 Conference of the United States in connection
16 with your research or analysis?
17 A. What particular materials or
18 meetings are you referring to?
19 Q. Any.
20 A. I don't recall, but it's
21 possible.
22 Q. Does tab 2 refer to any
23 documents that would provide you information
24 about the discussions or deliberations of the
25 Administrative Conference of the United

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1 States other than law review articles by
2 Emily Bremer?
3 A. As I sit here right now, I'm
4 not aware of any documents that discuss the
5 deliberations, but my memory is not perfect.
6 Q. Do you know if there was a
7 consensus in any relevant committee of the
8 Administrative Conference of the United
9 States regarding the conclusions that
10 Ms. Bremer states in her law review articles?
11 A. I don't.
12 MR. FEE: Objection. Vague.
13 BY MR. BRIDGES:
14 Q. Do you know whether there was
15 any dissent in any relevant committee of the
16 Administrative Conference of the United
17 States regarding the conclusions that
18 Ms. Bremer states in her law review articles?
19 MR. FEE: Objection to form.
20 THE WITNESS: I don't.
21 BY MR. BRIDGES:
22 Q. Do you know why persons get
23 appointed to the Administrative Conference of
24 the United States?
25 A. I may have known that, but I

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1 don't recall that sitting here now.
2 Q. Do you know whether
3 Ms. Bremer's articles -- strike that.
4 Do you know whether
5 Ms. Bremer's law review articles reflect a
6 view of the Administrative Conference of the
7 United States --
8 MR. FEE: Objection to form.
9 BY MR. BRIDGES:
10 Q. -- or of any of its committees?
11 MR. FEE: Objection to form.
12 THE WITNESS: I'm not aware
13 that they officially reflect that. I
14 believe she gathered information, and
15 they may, in fact, represent the views
16 of some or all members, but I don't
17 think that's -- that either article is
18 an official representation --
19 BY MR. BRIDGES:
20 Q. Are you --
21 A. -- of that body.
22 Q. Are you aware of the fact that
23 her articles -- her law review articles
24 specifically disclaim her articles as the
25 views of any government entity and indicate

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<p>1 members of their organizations?</p> <p>2 A. I did what I normally do in an</p> <p>3 assignment like this and look at the produced</p> <p>4 materials.</p> <p>5 Q. And the produced materials did</p> <p>6 not call out specifically any views of</p> <p>7 non-employee members of the plaintiff</p> <p>8 organizations, correct?</p> <p>9 A. I don't recall any specific</p> <p>10 views being summarized. My memory may not be</p> <p>11 perfect on that, though.</p> <p>12 Q. What research, if any, did you</p> <p>13 do among members of the public about whether</p> <p>14 lack of copyright protection for the</p> <p>15 plaintiffs' standards would be detrimental to</p> <p>16 the -- to the public?</p> <p>17 A. The information that I reviewed</p> <p>18 is in tab 2. I didn't have material beyond</p> <p>19 what is identified in tab 2.</p> <p>20 Q. So what in tab 2 reflects your</p> <p>21 steps to ascertain the views of members of</p> <p>22 the public?</p> <p>23 MR. FEE: Objection to form.</p> <p>24 THE WITNESS: I think the</p> <p>25 Bremer articles, in part, address</p> <p style="text-align: right;">Page 114</p>	<p>1 States other than law review articles by</p> <p>2 Emily Bremer?</p> <p>3 A. As I sit here right now, I'm</p> <p>4 not aware of any documents that discuss the</p> <p>5 deliberations, but my memory is not perfect.</p> <p>6 Q. Do you know if there was a</p> <p>7 consensus in any relevant committee of the</p> <p>8 Administrative Conference of the United</p> <p>9 States regarding the conclusions that</p> <p>10 Ms. Bremer states in her law review articles?</p> <p>11 A. I don't.</p> <p>12 MR. FEE: Objection. Vague.</p> <p>13 BY MR. BRIDGES:</p> <p>14 Q. Do you know whether there was</p> <p>15 any dissent in any relevant committee of the</p> <p>16 Administrative Conference of the United</p> <p>17 States regarding the conclusions that</p> <p>18 Ms. Bremer states in her law review articles?</p> <p>19 MR. FEE: Objection to form.</p> <p>20 THE WITNESS: I don't.</p> <p>21 BY MR. BRIDGES:</p> <p>22 Q. Do you know why persons get</p> <p>23 appointed to the Administrative Conference of</p> <p>24 the United States?</p> <p>25 A. I may have known that, but I</p> <p style="text-align: right;">Page 116</p>
<p>1 that. I think some of the federal</p> <p>2 government's circulars that I</p> <p>3 identify, in part, reflect the</p> <p>4 reviews, in particular the NTTAA of</p> <p>5 1995 and OMB Circular A-119. I think</p> <p>6 they, in part, reflect public views.</p> <p>7 There are probably other things.</p> <p>8 BY MR. BRIDGES:</p> <p>9 Q. Did you review OMB Circular</p> <p>10 A-119 personally?</p> <p>11 A. Yes. As I recall, I did.</p> <p>12 Q. Did you review any materials</p> <p>13 pertaining to the discussions or</p> <p>14 deliberations of the Administrative</p> <p>15 Conference of the United States in connection</p> <p>16 with your research or analysis?</p> <p>17 A. What particular materials or</p> <p>18 meetings are you referring to?</p> <p>19 Q. Any.</p> <p>20 A. I don't recall, but it's</p> <p>21 possible.</p> <p>22 Q. Does tab 2 refer to any</p> <p>23 documents that would provide you information</p> <p>24 about the discussions or deliberations of the</p> <p>25 Administrative Conference of the United</p> <p style="text-align: right;">Page 115</p>	<p>1 don't recall that sitting here now.</p> <p>2 Q. Do you know whether</p> <p>3 Ms. Bremer's articles -- strike that.</p> <p>4 Do you know whether</p> <p>5 Ms. Bremer's law review articles reflect a</p> <p>6 view of the Administrative Conference of the</p> <p>7 United States --</p> <p>8 MR. FEE: Objection to form.</p> <p>9 BY MR. BRIDGES:</p> <p>10 Q. -- or of any of its committees?</p> <p>11 MR. FEE: Objection to form.</p> <p>12 THE WITNESS: I'm not aware</p> <p>13 that they officially reflect that. I</p> <p>14 believe she gathered information, and</p> <p>15 they may, in fact, represent the views</p> <p>16 of some or all members, but I don't</p> <p>17 think that's -- that either article is</p> <p>18 an official representation --</p> <p>19 BY MR. BRIDGES:</p> <p>20 Q. Are you --</p> <p>21 A. -- of that body.</p> <p>22 Q. Are you aware of the fact that</p> <p>23 her articles -- her law review articles</p> <p>24 specifically disclaim her articles as the</p> <p>25 views of any government entity and indicate</p> <p style="text-align: right;">Page 117</p>

1 that they are her personal views?
2 A. I wouldn't be surprised and
3 may -- I may have read that, but I would
4 expect that that would be in the first
5 footnote of one or both articles.
6 Q. What did you do to examine the
7 alleged facts that the representatives of
8 plaintiffs stated to you in their
9 conversations with you?
10 MR. FEE: Objection to form.
11 THE WITNESS: I looked at --
12 MR. FEE: Asked and answered.
13 THE WITNESS: I'm sorry. I
14 looked at the document production and
15 the other materials shown in tab 2.
16 BY MR. BRIDGES:
17 Q. You looked at the document
18 production that the plaintiffs' counsel
19 furnished you?
20 A. In part. There were other
21 things in tab 2 that were not provided to me
22 by plaintiffs' counsel.
23 Q. What other materials in
24 tab 2 -- strike that.
25 Please identify for me in tab 2

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1 the materials that plaintiffs' counsel
2 furnished you.
3 A. I don't know with absolute
4 certainty, but let me give you my best guess.
5 I believe all the depositions that are shown
6 on page 1. I believe the Bates ranges at the
7 very top of the page were provided by
8 counsel.
9 The deposition transcripts and
10 exhibits were provided by counsel. I believe
11 the financial statements and plans were
12 provided by counsel. I believe the legal
13 documents were provided by counsel. I
14 believe the miscellaneous items were provided
15 by counsel.
16 I don't know about the cases
17 and laws. I just don't remember if we
18 separately gathered those or were provided
19 those.
20 The analyst reports, articles,
21 books, and presentations, I think we gathered
22 all of those, with the possible exception of
23 the two Bremer articles. I don't recall if
24 counsel provided that or we obtained those
25 separately.

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1 I believe counsel did not
2 provide the Web site screenshots, but I might
3 be wrong on that.
4 Q. And did you do anything --
5 what, if anything, did you do to test the
6 validity of the factual assertions that the
7 plaintiffs made to you in your conversations
8 with their employees?
9 MR. FEE: Objection to form.
10 Asked and answered.
11 THE WITNESS: Well, we looked
12 at materials. If we found things that
13 conflicted with what we learned, that
14 would prompt us to investigate
15 further. But I don't recall seeing
16 any documentary evidence that
17 conflicted with facts that were
18 provided by plaintiff personnel, but I
19 might be wrong.
20 BY MR. BRIDGES:
21 Q. Did you investigate
22 independently whether documents existed that
23 contradicted plaintiffs' statements of facts?
24 A. Not with that in mind. We
25 looked at the documents and were mindful of

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1 whether there were conflicts within documents
2 or conflicts between documents and other
3 information, but I don't recall that we saw
4 anything that gave us substantial pause.
5 There were probably some things
6 where there were some uncertainties whether
7 there was a conflict or not and some where
8 there were insignificant conflicts, but I
9 think mostly the information we saw did not
10 conflict with the information we learned from
11 plaintiff personnel.
12 Q. Did you investigate
13 independently whether other documents, apart
14 from the documents plaintiffs furnished you,
15 existed that contradicted plaintiffs'
16 statements of facts --
17 MR. FEE: Objection to form.
18 BY MR. BRIDGES:
19 Q. -- in conversations with you?
20 A. Yes, in the sense that we
21 gathered some information that we did not
22 receive from plaintiffs' counsel, but all of
23 that is identified in tab 2.
24 Q. Which part of tab 2?
25 A. Well, as I said, I think the

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<p>1 Web sites we gathered ourselves, and I think</p> <p>2 the reports and articles, with the exception</p> <p>3 of the Bremer articles, we gathered</p> <p>4 ourselves.</p> <p>5 Q. Do you know why you got no</p> <p>6 documents from NFPA, no Bates range documents</p> <p>7 from NFPA?</p> <p>8 MR. REHN: Object to form --</p> <p>9 THE WITNESS: I don't know why</p> <p>10 we did not receive Bates documents --</p> <p>11 THE REPORTER: Wait.</p> <p>12 MR. REHN: Sorry. Object to</p> <p>13 the form. Lacks foundation.</p> <p>14 THE WITNESS: I don't know for</p> <p>15 sure that we didn't receive</p> <p>16 Bates-stamped documents, but I believe</p> <p>17 some of the documents we received were</p> <p>18 NFPA documents.</p> <p>19 BY MR. BRIDGES:</p> <p>20 Q. Do you recall seeing any NFPA</p> <p>21 documents that -- in which NFPA personnel</p> <p>22 stated that they could not show any harm from</p> <p>23 the defendant's activities?</p> <p>24 A. Received any documents that</p> <p>25 said that?</p> <p>Page 122</p>	<p>1 Q. What did you hear about</p> <p>2 overseas litigation involving Public</p> <p>3 Resource?</p> <p>4 A. I think I heard that there was</p> <p>5 a German -- or a suit in Germany, but I'm not</p> <p>6 sure that I learned much more than that. I</p> <p>7 don't recall what status that suit -- what</p> <p>8 the status of that suit is.</p> <p>9 Q. Do you recall anyone disclosing</p> <p>10 to you litigation involving NFPA in the</p> <p>11 United States that pertained to standards and</p> <p>12 copyright?</p> <p>13 A. It's possible, but I don't</p> <p>14 recall any, sitting here right now.</p> <p>15 Q. Do you recall inquiring about</p> <p>16 public statements of fact that NFPA has made</p> <p>17 regarding copyright and standards in</p> <p>18 litigation other than this litigation in the</p> <p>19 United States?</p> <p>20 MR. FEE: Objection to form.</p> <p>21 THE WITNESS: I do not.</p> <p>22 BY MR. BRIDGES:</p> <p>23 Q. Are you familiar with a case</p> <p>24 called Veeck, V-E-E-C-K?</p> <p>25 A. I'm familiar with an opinion in</p> <p>Page 124</p>
<p>1 Q. Uh-huh.</p> <p>2 A. Perhaps you would have</p> <p>3 something that would refresh my memory. I</p> <p>4 don't recall, sitting here right now, but</p> <p>5 it's possible.</p> <p>6 Are you talking about</p> <p>7 historical -- historically no harm, or are</p> <p>8 you talking about prospectively?</p> <p>9 Q. Either one. Did you -- do you</p> <p>10 recall seeing any internal NFPA documents</p> <p>11 that call into question where NF -- whether</p> <p>12 NFPA has suffered any harm from the</p> <p>13 defendant's activities?</p> <p>14 A. I don't recall documents on it.</p> <p>15 There may have been some deposition testimony</p> <p>16 about past activities, but I don't know if it</p> <p>17 was activities prior to Public Resource</p> <p>18 actions here or after.</p> <p>19 Q. Do you recall learning about</p> <p>20 any litigation that NFPA had engaged in</p> <p>21 pertaining to standards and copyright?</p> <p>22 A. I think I heard that there's</p> <p>23 some overseas litigation involving Public</p> <p>24 Resource. Whether that involves NFPA, I</p> <p>25 don't know.</p> <p>Page 123</p>	<p>1 the Veeck case.</p> <p>2 Q. What do you know about that</p> <p>3 opinion?</p> <p>4 MR. FEE: Objection.</p> <p>5 I would instruct you not to</p> <p>6 disclose anything you know about that</p> <p>7 opinion that was a result of</p> <p>8 communications with counsel and that</p> <p>9 did not form the basis of any of the</p> <p>10 opinions in your report or any of the</p> <p>11 assumptions that you relied upon in</p> <p>12 reaching your conclusions.</p> <p>13 THE WITNESS: I did talk with</p> <p>14 counsel about that case, and that case</p> <p>15 didn't form any basis for any of my</p> <p>16 observations or conclusions here.</p> <p>17 BY MR. BRIDGES:</p> <p>18 Q. Why did the Veeck case not form</p> <p>19 any basis for any of your observations or</p> <p>20 conclusions here?</p> <p>21 A. I don't know how to answer that</p> <p>22 question. I -- it didn't present any facts</p> <p>23 that were specific to this case, as far as I</p> <p>24 recall.</p> <p>25 Q. What do you recall of the facts</p> <p>Page 125</p>

1 answered.
2 THE WITNESS: Again, I read the
3 case. I didn't do any analysis beyond
4 that of that particular case.
5 BY MR. BRIDGES:
6 Q. What steps did you take to
7 ascertain what public harms flowed from the
8 Court's decision in the Veeck case?
9 A. Other than reading the case,
10 the opinion in the case, I didn't do anything
11 beyond that to understand the implications of
12 that holding.
13 Q. You didn't do any investigation
14 as to the economic consequences to any
15 entity, industry, or person as a consequence
16 of the decision in the Veeck case, correct?
17 MR. FEE: Objection to form.
18 THE WITNESS: I think that's
19 correct, yes.
20 BY MR. BRIDGES:
21 Q. How has the process of
22 standards development changed in the last 100
23 years, to your knowledge?
24 A. I don't know the specifics, and
25 I don't know that there is one standards

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1 development process. I think there are a
2 variety of processes pursued by a number of
3 SSOs or SDOs. I'm sure that there have been
4 changes on the margin. There may have been
5 larger changes. I just don't know. I have
6 not studied the trend in the standard
7 development process over time.
8 Q. What changes are you aware of
9 in the standards development process of NFPA
10 over the past 100 years?
11 A. I don't know. I've not studied
12 that topic.
13 Q. What changes are you aware of
14 in the standards development process of the
15 ASHRAE 90.1 standard?
16 A. I don't know. I've not studied
17 that.
18 Q. How did ASHRAE come to develop
19 the 90.1 standard?
20 A. I think, generally, a need was
21 identified and a group of constituents
22 convened to derive a standard, but I don't
23 know the specifics beyond that.
24 Q. Do you know who identified the
25 need?

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1 A. Not sitting here right now, I
2 don't.
3 Q. Do you know whether ASHRAE took
4 over development of what became standard 90.1
5 from any other group or entity?
6 A. No, I do not.
7 Q. Have you ever quantified the
8 value of the contributions made by the
9 volunteers of the various organizations to
10 the standards at issue in this case?
11 MR. FEE: Objection to form.
12 THE WITNESS: Not other than
13 having some sense of hours or a
14 limited sense of dollars, but not
15 beyond that, no.
16 BY MR. BRIDGES:
17 Q. Can you put a rough dollar
18 value on the time and expenses of the
19 volunteers with respect to any of the
20 standards in this case?
21 MR. FEE: Objection to form.
22 THE WITNESS: Not sitting here
23 right now. That would entail a little
24 bit of a study. I have not done that.
25 BY MR. BRIDGES:

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1 Q. What -- what would be required?
2 A. To understand basically the
3 out-of-pocket expenses incurred and the
4 opportunity costs incurred. So among other
5 things, one would want to look at time
6 records, have an understanding of
7 compensation, have an understanding of the
8 activities of those individuals. Those
9 are -- would be among the inputs.
10 Q. What changes are you aware of
11 in the distribution of standards in the past
12 100 years by the plaintiffs?
13 MR. FEE: Objection to form.
14 THE WITNESS: I haven't
15 investigated that particular issue,
16 but I understand that some of the
17 standards today are distributed
18 through the Internet that certainly
19 didn't exist 100 years ago.
20 Some of the standards are
21 distributed for free with limitations.
22 I don't know if that was true 100
23 years ago, but it might have been.
24 I would expect some of the
25 copying and dissemination capabilities

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1 are much greater today than they were
2 in 1915, but I don't know that the
3 general methods of -- I don't know how
4 the general methods of distribution
5 have changed.
6 BY MR. BRIDGES:
7 Q. What changes are you aware of
8 in sales trends over the past 20 years?
9 MR. FEE: Objection to form.
10 THE WITNESS: I don't have data
11 going back as far as 20 years ago. I
12 have some information on publication
13 sales, for instance, in tabs 3, 4, and
14 5. They only -- that information only
15 goes back a few years, however.
16 BY MR. BRIDGES:
17 Q. Did you review any information
18 earlier than the dates shown in the documents
19 at tabs 3, 4, and 5?
20 MR. FEE: Objection. Vague.
21 THE WITNESS: It's possible
22 that some of the source documents had
23 earlier information, but I don't
24 recall that. I would need to look at
25 those source documents.

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1 BY MR. BRIDGES:
2 Q. And those source documents
3 would be within the Bates ranges identified
4 in tab 2 of your report?
5 A. Within the Bates ranges or
6 identified elsewhere in tab 2. For instance,
7 the AS team -- ASTM audited -- audited
8 consolidated financial statements, I think,
9 may not all be Bates-stamped. I could be
10 wrong on that. But I would look in that set
11 of financial documents.
12 Q. What do you know about what you
13 said -- strike that.
14 You said earlier that some
15 standards are distributed for free with some
16 limitations; is that correct?
17 A. Yes, that's my understanding.
18 Q. What do you know about that?
19 MR. FEE: Objection. Vague.
20 THE WITNESS: I've written
21 about that in my report. I believe
22 that each one of the plaintiffs has
23 provided what is sometimes called a
24 "reading room" so that people can look
25 at those standards but are not given

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1 the right to reproduce, copy, or
2 disseminate those standards but can
3 look at them online.
4 BY MR. BRIDGES:
5 Q. Have you used the reading rooms
6 of any of the plaintiffs?
7 A. No, I have not.
8 Q. Have you reviewed the interface
9 that the -- have you reviewed the interfaces
10 that the plaintiffs offer to persons wishing
11 to view materials for free online?
12 A. No, I don't think so.
13 Q. Do you know what effect, if
14 any, the presence of those free materials on
15 the plaintiffs' Web sites has had on the
16 plaintiffs' revenues?
17 MR. FEE: Objection to form.
18 THE WITNESS: No, I don't.
19 BY MR. BRIDGES:
20 Q. Have you -- have you
21 investigated that?
22 MR. FEE: Same objection.
23 THE WITNESS: I've been
24 opening -- I've been open to learning
25 about that, but I haven't learned that

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1 there's a direct or indirect effect.
2 There might be, but I haven't seen
3 evidence of that.
4 BY MR. BRIDGES:
5 Q. My question was, have you
6 investigated that?
7 MR. FEE: Same objection.
8 THE WITNESS: Perhaps you could
9 read back my answer.
10 BY MR. BRIDGES:
11 Q. I've heard the answer. It was
12 not responsive to my question. The -- you
13 said you did not know what effect, if any,
14 the presence of those free materials on the
15 plaintiffs' Web sites has had on the
16 plaintiffs' revenues.
17 And my question is, have you
18 investigated that?
19 MR. FEE: Same objection.
20 THE WITNESS: No, I've not
21 undertaken a separate investigation.
22 I've been alert to that topic, but I
23 haven't assigned myself that
24 investigation.
25 BY MR. BRIDGES:

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1 Q. Was something that was --
2 remained pending at the time you wrote this
3 report as something that you expected to do
4 in the future?
5 A. No.
6 MR. FEE: Objection. Vague.
7 THE WITNESS: I'm sorry.
8 No.
9 BY MR. BRIDGES:
10 Q. Did you study the practices of
11 any standards development organizations,
12 other than the plaintiffs, for purposes of
13 your work in this case?
14 MR. FEE: Objection. Vague.
15 THE WITNESS: Not that I
16 recall. I saw reference to other SDOs
17 in the Bremer articles, for instance,
18 but I didn't undertake a separate
19 investigation of the practices of any
20 other SDOs for purposes of my
21 assignment here.
22 BY MR. BRIDGES:
23 Q. Are you aware of practices or
24 policies of other SDOs with reference to
25 either copyright or free availability of

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1 their materials?
2 MR. FEE: Objection to form.
3 THE WITNESS: I may have been
4 aware through other assignments I've
5 undertaken in the past, but I didn't
6 undertake any separate investigation
7 for purposes of this matter.
8 BY MR. BRIDGES:
9 Q. What awareness do you have of
10 the practices or policies of other SDOs
11 through other assignments you've undertaken
12 in the past?
13 MR. FEE: Objection to form.
14 THE WITNESS: I can only recall
15 most generally that they view
16 intellectual property protection as
17 being very important, but I can't be
18 any more specific than that.
19 BY MR. BRIDGES:
20 Q. Which SDOs you -- do you recall
21 treating intellectual property protection as
22 very important?
23 A. Well, again, I've -- I've dealt
24 with standards setting organizations. I
25 don't know if any of those are technically

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1 SDOs, but the standard setting organizations
2 that are the candidates are the ones that I
3 identified earlier today.
4 Q. Which SDOs do you recall
5 treating copyright protection of their
6 standards as very important?
7 A. I just don't recall right now.
8 I -- I have some vague recollection that
9 copyright considerations are addressed by
10 ETSI, but I could be wrong on that.
11 Q. What do you know about policies
12 or practices of the Blu-ray organization with
13 respect to copyright protection?
14 A. I assume you're talking about
15 the Blu-ray Association? I may have known
16 when I was involved in that matter. I do not
17 remember, sitting here now.
18 Q. Do you recall that your report
19 actually refers to the Blu-ray Association?
20 A. I think I refer to Blu-ray
21 standards. I don't recall if I refer to the
22 Blu-ray Association, but perhaps you could
23 refresh my memory.
24 Q. I believe you point it out at
25 the bottom of page 62. "While certain SDOs

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1 (e.g., the Blu-ray disc association) provide
2 unrestricted access to their standard
3 publications for free, the Plaintiffs here do
4 not."
5 Do you recall that?
6 A. Now I do. Thank you for
7 refreshing my memory.
8 Q. What economic effects are you
9 aware of the fact that the Blu-ray Disc
10 Association provides unrestricted access to
11 its standard publications for free?
12 A. I have not investigated that
13 issue, so I don't know.
14 Q. What other SDOs have you
15 identified that provide unrestricted access
16 to their standards for free?
17 A. I don't think I've identified
18 any others in my report.
19 Q. Did you look for any others?
20 A. Not that I recall.
21 Q. Why not?
22 A. I don't know how to answer
23 that. I was aware of the Blu-ray Disc
24 Association's policy in this regard, so I
25 wrote about it here.

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<p>1 Q. Why did you not consider the 2 economic effects of free distribution of 3 standards with respect to other 4 organizations? 5 A. I didn't quite see the 6 relevance to this matter. 7 Q. Why? 8 A. I don't know how to prove a 9 negative. 10 Q. What's the negative you were 11 thinking of that would need to be proved or 12 disproved? 13 A. That something is not relevant. 14 Q. You just didn't see the 15 relevance? 16 A. I don't understand how that 17 would be helpful in the assignment that I had 18 here. 19 Q. And what was the assignment you 20 had here? 21 A. Well, I've laid it out -- 22 Q. I can read the report. I'm not 23 asking you to read -- read the report. I'd 24 like your own words now, sitting here. 25 MR. FEE: Objection.</p> <p>Page 142</p>	<p>1 perspective. 2 BY MR. BRIDGES: 3 Q. And what is the relevance of 4 economic analysis to that question, as you 5 understand it? 6 MR. FEE: Objection to form. 7 Vague. Might also be construed to 8 require a legal conclusion. 9 THE WITNESS: Economists have a 10 view and perspective at looking at 11 issues that some courts have found to 12 be useful. 13 BY MR. BRIDGES: 14 Q. Well, I'm asking, with specific 15 relevance to this case, what do you 16 understand the importance of economic 17 analysis to be in this case -- 18 MR. FEE: Objection. Calls -- 19 BY MR. BRIDGES: 20 Q. -- as you have purported to 21 practice it? 22 MR. FEE: Calls for a legal 23 conclusion. 24 Also, to the extent that 25 responding to that would require you</p> <p>Page 144</p>
<p>1 BY MR. BRIDGES: 2 Q. How do you -- how do you 3 view -- 4 A. I'd like to answer it by 5 looking at my report. 6 Q. No, I'd like for you to give me 7 a straight answer, because if you're just 8 going to refer to the report, the report will 9 speak for itself, and I don't need you to 10 read it to me. 11 I'd like for you to tell me 12 what you understand, sitting here, to have 13 been your assignment in this case. 14 MR. FEE: Objection. 15 You can answer the question 16 however you deem appropriate. 17 THE WITNESS: I've aptly laid 18 it out in my report, so I defer to the 19 words in my report. 20 But I've, in essence, looked at 21 the topic of the impact of copyright 22 and trademark infringement here, and 23 asked myself the question whether a 24 permanent injunction would be 25 appropriate from an economic</p> <p>Page 143</p>	<p>1 to disclose communications with 2 counsel that did not form the basis 3 for any of your opinions or 4 conclusions and did not provide any 5 assumptions that were the basis for 6 your opinions or conclusions, you 7 should not answer that portion of the 8 question. 9 THE WITNESS: I understand 10 that, generally, economists like me 11 are quite helpful in determining 12 questions of harm, particularly harm 13 as it relates to infringement of IP 14 rights. 15 BY MR. BRIDGES: 16 Q. How do you distinguish between 17 harms that are caused by an infringement by 18 the defendant versus harms that might be 19 caused by a court decision that plaintiffs 20 lack copyrights? 21 MR. FEE: Objection to the 22 extent it calls for a legal 23 conclusion. 24 THE WITNESS: I don't know how 25 to answer that question. I didn't ask</p> <p>Page 145</p>

<p>1 Q. Why did you not consider the 2 economic effects of free distribution of 3 standards with respect to other 4 organizations? 5 A. I didn't quite see the 6 relevance to this matter. 7 Q. Why? 8 A. I don't know how to prove a 9 negative. 10 Q. What's the negative you were 11 thinking of that would need to be proved or 12 disproved? 13 A. That something is not relevant. 14 Q. You just didn't see the 15 relevance? 16 A. I don't understand how that 17 would be helpful in the assignment that I had 18 here. 19 Q. And what was the assignment you 20 had here? 21 A. Well, I've laid it out -- 22 Q. I can read the report. I'm not 23 asking you to read -- read the report. I'd 24 like your own words now, sitting here. 25 MR. FEE: Objection.</p> <p>Page 142</p>	<p>1 perspective. 2 BY MR. BRIDGES: 3 Q. And what is the relevance of 4 economic analysis to that question, as you 5 understand it? 6 MR. FEE: Objection to form. 7 Vague. Might also be construed to 8 require a legal conclusion. 9 THE WITNESS: Economists have a 10 view and perspective at looking at 11 issues that some courts have found to 12 be useful. 13 BY MR. BRIDGES: 14 Q. Well, I'm asking, with specific 15 relevance to this case, what do you 16 understand the importance of economic 17 analysis to be in this case -- 18 MR. FEE: Objection. Calls -- 19 BY MR. BRIDGES: 20 Q. -- as you have purported to 21 practice it? 22 MR. FEE: Calls for a legal 23 conclusion. 24 Also, to the extent that 25 responding to that would require you</p> <p>Page 144</p>
<p>1 BY MR. BRIDGES: 2 Q. How do you -- how do you 3 view -- 4 A. I'd like to answer it by 5 looking at my report. 6 Q. No, I'd like for you to give me 7 a straight answer, because if you're just 8 going to refer to the report, the report will 9 speak for itself, and I don't need you to 10 read it to me. 11 I'd like for you to tell me 12 what you understand, sitting here, to have 13 been your assignment in this case. 14 MR. FEE: Objection. 15 You can answer the question 16 however you deem appropriate. 17 THE WITNESS: I've aptly laid 18 it out in my report, so I defer to the 19 words in my report. 20 But I've, in essence, looked at 21 the topic of the impact of copyright 22 and trademark infringement here, and 23 asked myself the question whether a 24 permanent injunction would be 25 appropriate from an economic</p> <p>Page 143</p>	<p>1 to disclose communications with 2 counsel that did not form the basis 3 for any of your opinions or 4 conclusions and did not provide any 5 assumptions that were the basis for 6 your opinions or conclusions, you 7 should not answer that portion of the 8 question. 9 THE WITNESS: I understand 10 that, generally, economists like me 11 are quite helpful in determining 12 questions of harm, particularly harm 13 as it relates to infringement of IP 14 rights. 15 BY MR. BRIDGES: 16 Q. How do you distinguish between 17 harms that are caused by an infringement by 18 the defendant versus harms that might be 19 caused by a court decision that plaintiffs 20 lack copyrights? 21 MR. FEE: Objection to the 22 extent it calls for a legal 23 conclusion. 24 THE WITNESS: I don't know how 25 to answer that question. I didn't ask</p> <p>Page 145</p>

<p>1 myself the question of ownership or 2 impact of ownership. I asked myself 3 the question here of impact of 4 infringement. 5 BY MR. BRIDGES: 6 Q. If it turns out that the Court 7 rules that the plaintiff -- sorry. Strike 8 that. 9 If it turns out the Court rules 10 here that the defendant has engaged in fair 11 use, is it your understanding that none of 12 your harms analysis is relevant -- 13 MR. FEE: Objection. 14 BY MR. BRIDGES: 15 Q. -- because of a finding of 16 non-infringement? 17 MR. FEE: Calls for a legal 18 conclusion. 19 To the extent answering that 20 question would require you to disclose 21 communications you had with counsel 22 that don't form the basis for any of 23 your opinions or conclusions and don't 24 provide any assumptions that you 25 relied upon, you shouldn't disclose</p> <p style="text-align: right;">Page 146</p>	<p>1 under the assumption that the 2 activities violate the law. 3 BY MR. BRIDGES: 4 Q. If the activities -- do you 5 believe -- do you understand that your 6 analysis is relevant to a determination of 7 whether the defendant has violated the law? 8 MR. FEE: Objection. Calls for 9 a legal conclusion. 10 To the extent that your 11 understanding is based upon 12 communications with counsel, you 13 shouldn't disclose them, unless they 14 formed the basis for your opinions or 15 conclusions or provided assumptions 16 that you relied upon in reaching your 17 conclusions. 18 THE WITNESS: I don't know. 19 BY MR. BRIDGES: 20 Q. Do you have any view as to 21 whether the defendant has violated copyright 22 law? 23 MR. FEE: Objection. Calls for 24 a legal conclusion. 25 THE WITNESS: No, I've not</p> <p style="text-align: right;">Page 148</p>
<p>1 those communications. 2 THE WITNESS: You're asking for 3 a legal conclusion. I'm not an expert 4 on that. 5 BY MR. BRIDGES: 6 Q. I'm understanding your 7 understanding -- I'm asking for your 8 understanding of the relevance of your 9 contributions to this case. 10 MR. FEE: Objection. Asked and 11 answered. Plus all the prior 12 objections and instructions. 13 THE WITNESS: I believe my 14 testimony and report are relevant to 15 the issue of harm and potential harm. 16 BY MR. BRIDGES: 17 Q. From what? 18 A. From continuing -- the 19 continuing activities and possible expanded 20 activities of the defendant here. 21 Q. From activities or from 22 violations of law? 23 MR. FEE: Objection. Vague. 24 Calls for a legal conclusion. 25 THE WITNESS: I -- I'm working</p> <p style="text-align: right;">Page 147</p>	<p>1 taken on that assignment. 2 BY MR. BRIDGES: 3 Q. Do you have any view as to 4 whether the defendant's activities constitute 5 fair use? 6 MR. FEE: Objection. Calls for 7 a legal conclusion. 8 THE WITNESS: No, I've not 9 taken on that assignment. 10 BY MR. BRIDGES: 11 Q. If a court determines that the 12 defendant has not infringed upon plaintiffs' 13 copyrights, do you understand that the 14 decision would result in economic harm to the 15 plaintiffs? 16 MR. FEE: Objection to the 17 extent it calls for a legal 18 conclusion. 19 THE WITNESS: I'm not following 20 your question. Could you ask it a 21 little bit differently, please? 22 BY MR. BRIDGES: 23 Q. No, I'll restate it if you just 24 need to rehear it. 25 A. No, I don't need to rehear it.</p> <p style="text-align: right;">Page 149</p>

<p>1 If you could recast it, please. 2 Q. No. Then please answer my 3 question. 4 MR. FEE: Objection. 5 BY MR. BRIDGES: 6 Q. I get to ask the questions. 7 MR. FEE: He just said he 8 couldn't answer it. 9 THE WITNESS: I don't 10 understand the question. 11 BY MR. BRIDGES: 12 Q. What is it you don't 13 understand? 14 A. I understand each word but not 15 how you put them together. 16 Q. If a court determines that the 17 defendant has not infringed upon the 18 plaintiffs' copyrights, do you believe that 19 that decision would result in economic harm 20 to the plaintiffs? 21 MR. FEE: Objection to the 22 extent it calls for a legal 23 conclusion. Plus asked and answered. 24 THE WITNESS: It sounds like 25 exactly the same words, so I'm not</p> <p>Page 150</p>	<p>1 that's fine. 2 A. I want to, but I cannot. 3 Q. Well -- 4 A. I do not understand the 5 question. 6 Q. I'll say it again. 7 Would a decision by the Court 8 that the defendant has not infringed upon the 9 plaintiffs' copyrights result in economic 10 harm to the plaintiffs? 11 MR. FEE: Objection. Calls for 12 a legal conclusion. Asked and 13 answered. 14 THE WITNESS: I -- 15 MR. FEE: Vague. 16 THE WITNESS: I cannot answer 17 it any differently. I'm sorry. 18 Is this a good time for a 19 break, or do you want to keep going? 20 MR. BRIDGES: Sure. We can 21 take one if you want. 22 THE VIDEOGRAPHER: Off the 23 record at 1:17. 24 * * * 25 (Recess from 1:17 p.m. to</p> <p>Page 152</p>
<p>1 sure how to answer that question. 2 BY MR. BRIDGES: 3 Q. Would a decision that the 4 defendant has not infringed upon plaintiffs' 5 copyrights result in economic harm to the 6 plaintiffs? 7 MR. FEE: Objection. Calls for 8 a legal conclusion. 9 THE WITNESS: I'm just not 10 following. I under -- I'm worked -- 11 I'm working under the assumption that 12 the activity here represents a 13 copyright infringement. I'm -- and 14 I'm being asked and answering the 15 question of the impact of that and 16 whether there would be harm and what 17 kind of harm and whether that's 18 reparable harm. 19 So I'm focusing on what has 20 been done and what may continue to be 21 done by the defendant. 22 BY MR. BRIDGES: 23 Q. That's non-responsive. I'll 24 ask you to answer my question. And if you 25 just don't want to answer the question,</p> <p>Page 151</p>	<p>1 2:12 p.m.) 2 * * * 3 THE VIDEOGRAPHER: On the 4 record at 2:12. 5 BY MR. BRIDGES: 6 Q. Good afternoon, Mr. Jarosz. 7 A. Good afternoon. 8 Q. Could you outline for me, 9 please, what steps you took in your 10 engagement in this case? What are the 11 different activities you engaged in? 12 A. Generally, I had a discussion 13 with counsel about the matter. Then we 14 examined documents that would -- were 15 provided to us to give us background. We 16 then proceeded to gather our own information 17 from third-party sources, primarily through 18 Internet searches. 19 We obtained information that 20 had been produced as part of discovery. We 21 had conversations with people at the various 22 plaintiff organizations. 23 We outlined the report and 24 summarized some of the information that you 25 see in the tabs. We had discussions with</p> <p>Page 153</p>

1 If you could recast it, please.
2 Q. No. Then please answer my
3 question.
4 MR. FEE: Objection.
5 BY MR. BRIDGES:
6 Q. I get to ask the questions.
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8 couldn't answer it.
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10 understand the question.
11 BY MR. BRIDGES:
12 Q. What is it you don't
13 understand?
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15 how you put them together.
16 Q. If a court determines that the
17 defendant has not infringed upon the
18 plaintiffs' copyrights, do you believe that
19 that decision would result in economic harm
20 to the plaintiffs?
21 MR. FEE: Objection to the
22 extent it calls for a legal
23 conclusion. Plus asked and answered.
24 THE WITNESS: It sounds like
25 exactly the same words, so I'm not

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1 sure how to answer that question.
2 BY MR. BRIDGES:
3 Q. Would a decision that the
4 defendant has not infringed upon plaintiffs'
5 copyrights result in economic harm to the
6 plaintiffs?
7 MR. FEE: Objection. Calls for
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10 following. I under -- I'm worked --
11 I'm working under the assumption that
12 the activity here represents a
13 copyright infringement. I'm -- and
14 I'm being asked and answering the
15 question of the impact of that and
16 whether there would be harm and what
17 kind of harm and whether that's
18 reparable harm.
19 So I'm focusing on what has
20 been done and what may continue to be
21 done by the defendant.
22 BY MR. BRIDGES:
23 Q. That's non-responsive. I'll
24 ask you to answer my question. And if you
25 just don't want to answer the question,

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1 that's fine.
2 A. I want to, but I cannot.
3 Q. Well --
4 A. I do not understand the
5 question.
6 Q. I'll say it again.
7 Would a decision by the Court
8 that the defendant has not infringed upon the
9 plaintiffs' copyrights result in economic
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11 MR. FEE: Objection. Calls for
12 a legal conclusion. Asked and
13 answered.
14 THE WITNESS: I --
15 MR. FEE: Vague.
16 THE WITNESS: I cannot answer
17 it any differently. I'm sorry.
18 Is this a good time for a
19 break, or do you want to keep going?
20 MR. BRIDGES: Sure. We can
21 take one if you want.
22 THE VIDEOGRAPHER: Off the
23 record at 1:17.
24 * * *
25 (Recess from 1:17 p.m. to

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1 2:12 p.m.)
2 * * *
3 THE VIDEOGRAPHER: On the
4 record at 2:12.
5 BY MR. BRIDGES:
6 Q. Good afternoon, Mr. Jarosz.
7 A. Good afternoon.
8 Q. Could you outline for me,
9 please, what steps you took in your
10 engagement in this case? What are the
11 different activities you engaged in?
12 A. Generally, I had a discussion
13 with counsel about the matter. Then we
14 examined documents that would -- were
15 provided to us to give us background. We
16 then proceeded to gather our own information
17 from third-party sources, primarily through
18 Internet searches.
19 We obtained information that
20 had been produced as part of discovery. We
21 had conversations with people at the various
22 plaintiff organizations.
23 We outlined the report and
24 summarized some of the information that you
25 see in the tabs. We had discussions with

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<p>1 counsel. And then we finalized the report, 2 submitting it to counsel on June 5th, 2015. 3 Q. Do you know how many standards 4 of each plaintiff are at issue in this case? 5 A. How many -- I'm sorry -- 6 standards are at issue? 7 Q. Yes. 8 A. I have that number written 9 down. It's in the hundreds, and I forget, as 10 I sit here right now, precisely the number. 11 I will look it up. And I was giving you an 12 answer that was a cumulation across the three 13 plaintiffs. 14 I am not seeing that number 15 right now. I'll keep looking. 16 Q. Do you know what -- 17 A. You may be able to point me 18 quicker than I recall where it was. 19 Q. Do you -- do you know what 20 proportion of plaintiffs -- of each 21 plaintiffs' standards is at issue in this 22 case? 23 A. Are you asking me the ratio of 24 the standards at issue versus the total 25 standards developed by the organizations?</p> <p>Page 154</p>	<p>1 Q. Have you analyzed any 2 differences in sales trends between those of 3 plaintiffs' standards that have been 4 incorporated into law and those of 5 plaintiffs' standards that have not been 6 incorporated into law? 7 A. I don't think so. I don't 8 think I have those data, and I'm not sure 9 that each plaintiff knows precisely how many 10 have been incorporated into law. 11 Q. Did you ask for any data 12 regarding the distinction between standards 13 incorporated by reference and standards not 14 incorporated by reference in the law? 15 A. I don't -- 16 MR. FEE: Objection to form. 17 THE WITNESS: I'm sorry. I 18 don't recall. 19 BY MR. BRIDGES: 20 Q. You made observations about 21 sales trends earlier in your deposition. I 22 think you said that there's been a reduction 23 in sales of certain of plaintiffs' standards; 24 is that correct? 25 A. I'm not quite sure what the</p> <p>Page 156</p>
<p>1 Q. Yes. 2 A. I think it's less than a 3 majority for each organization. I'm fairly 4 certain of that with regard to ASTM. I think 5 that's true with regard to NFPA. I think 6 it's true with regard to ASHRAE. 7 Q. Do you have any better 8 information than less than a majority -- 9 A. Well, I -- 10 Q. -- for each of them? 11 A. The precise numbers are in the 12 report. Let's see here. One can figure that 13 out. You may remember where I summarized the 14 number of standards. I just don't remember. 15 It's easy to determine because the data are 16 all here. 17 Q. Have you analyzed differences 18 in sales trends between standards that are at 19 issue in this case and plaintiffs' other 20 standards? 21 A. No, I don't think I have those 22 data at my disposal. 23 Q. Did you ever ask for those 24 data? 25 A. I don't recall.</p> <p>Page 155</p>	<p>1 earlier testimony was, but I think I was 2 pointing you to paragraph 133 with regard to 3 downloads of -- and other measures of 4 activity, as I had at my disposal. 5 Q. Well, I'm trying to find out 6 what changes you have studied in plaintiffs' 7 economics that you attribute to defendant's 8 activities. 9 A. I'm not quite sure what your 10 question is. 11 Q. Well, I'm trying to find out 12 what information you have studied to 13 determine what changes in the finances of 14 each of the plaintiffs have occurred as a 15 consequence of the defendant's activities. 16 MR. FEE: Objection to form. 17 THE WITNESS: I'm still not 18 sure that I'm hearing a question. But 19 to the extent that I had information 20 on changes in activity level, I 21 summarized that in paragraph 133. 22 BY MR. BRIDGES: 23 Q. My question is, what 24 information did you study to determine any 25 changes in finances of each of the</p> <p>Page 157</p>

<p>1 plaintiffs?</p> <p>2 MR. FEE: Same objection.</p> <p>3 THE WITNESS: It's reflected in</p> <p>4 paragraph 133 and in the tabs,</p> <p>5 particularly 3, 4, and 5. But the</p> <p>6 tabs are not at the granular level</p> <p>7 that I think are of interest to you.</p> <p>8 BY MR. BRIDGES:</p> <p>9 Q. What do you mean by the</p> <p>10 "granular level" that would be of interest to</p> <p>11 me?</p> <p>12 A. I don't think it breaks out</p> <p>13 publications by standard, for instance.</p> <p>14 Q. Does it break out publications</p> <p>15 by whether a standard has been incorporated</p> <p>16 by reference or not?</p> <p>17 A. I don't think so.</p> <p>18 Q. Does it break out by whether a</p> <p>19 standard has been publicly made available by</p> <p>20 defendant or not?</p> <p>21 A. I don't think so. Not in</p> <p>22 tabs 3, 4, and 5.</p> <p>23 Q. How do you establish causation</p> <p>24 between defendant's activities and any of the</p> <p>25 data that you provide in section -- in</p> <p>Page 158</p>	<p>1 of certain of the standards. I've</p> <p>2 presented that.</p> <p>3 I don't have direct evidence of</p> <p>4 the precise impact historically of</p> <p>5 defendant's activities on plaintiffs'</p> <p>6 financials.</p> <p>7 BY MR. BRIDGES:</p> <p>8 Q. What evidence of any kind do</p> <p>9 you have of any kind of impact historically</p> <p>10 of the defendant's activities on plaintiffs'</p> <p>11 financials?</p> <p>12 MR. FEE: Objection to form.</p> <p>13 THE WITNESS: That which is</p> <p>14 reported in paragraph 133, that of</p> <p>15 which is contained in deposition</p> <p>16 testimony, and that of which I</p> <p>17 summarized in other parts of the</p> <p>18 report.</p> <p>19 BY MR. BRIDGES:</p> <p>20 Q. So when you're referring to</p> <p>21 deposition testimony, you're referring to the</p> <p>22 citations to the footnotes in paragraph 133?</p> <p>23 A. No, I don't think it's just</p> <p>24 limited to that. I think there's some other</p> <p>25 deposition transcripts that talk about the</p> <p>Page 160</p>
<p>1 paragraph 133?</p> <p>2 MR. FEE: Objection. Calls for</p> <p>3 a legal conclusion. Form.</p> <p>4 THE WITNESS: One can and</p> <p>5 should look at all evidence available,</p> <p>6 including circumstantial evidence. I</p> <p>7 don't have direct information about</p> <p>8 the precise impact of defendant's</p> <p>9 activities, but I have important</p> <p>10 information that bears on that issue,</p> <p>11 including information that's in</p> <p>12 deposition transcripts.</p> <p>13 BY MR. BRIDGES:</p> <p>14 Q. So my question is, how do</p> <p>15 you -- do you -- strike that.</p> <p>16 Are your conclusion -- are you</p> <p>17 making conclusions in paragraph 133 about the</p> <p>18 cause of changes in sales of the plaintiffs'</p> <p>19 products?</p> <p>20 MR. FEE: Objection to form.</p> <p>21 THE WITNESS: Not definitively.</p> <p>22 I have observations about the</p> <p>23 magnitude and trend of the downloads</p> <p>24 of -- through defendant's sites. I</p> <p>25 have some information on the downloads</p> <p>Page 159</p>	<p>1 impact or potential impact of defendant's</p> <p>2 activities on each one of the plaintiffs.</p> <p>3 Q. Did you make any independent</p> <p>4 assessment of causation of any financial</p> <p>5 effects on plaintiffs by the defendant's</p> <p>6 activities?</p> <p>7 MR. FEE: Objection to form.</p> <p>8 Calls for a legal conclusion.</p> <p>9 THE WITNESS: What do you mean</p> <p>10 by the term of "independent assessment</p> <p>11 of causation"?</p> <p>12 BY MR. BRIDGES:</p> <p>13 Q. You, as an expert, not relying</p> <p>14 just on what other people have said or</p> <p>15 speculated or thought.</p> <p>16 MR. FEE: Same objections.</p> <p>17 Plus compound.</p> <p>18 THE WITNESS: We experts rely</p> <p>19 on other information to draw the</p> <p>20 conclusions that we do, and then we</p> <p>21 bring our training to it. So our</p> <p>22 observations shouldn't be in a vacuum.</p> <p>23 BY MR. BRIDGES:</p> <p>24 Q. But they should be objective,</p> <p>25 correct?</p> <p>Page 161</p>

<p>1 plaintiffs?</p> <p>2 MR. FEE: Same objection.</p> <p>3 THE WITNESS: It's reflected in</p> <p>4 paragraph 133 and in the tabs,</p> <p>5 particularly 3, 4, and 5. But the</p> <p>6 tabs are not at the granular level</p> <p>7 that I think are of interest to you.</p> <p>8 BY MR. BRIDGES:</p> <p>9 Q. What do you mean by the</p> <p>10 "granular level" that would be of interest to</p> <p>11 me?</p> <p>12 A. I don't think it breaks out</p> <p>13 publications by standard, for instance.</p> <p>14 Q. Does it break out publications</p> <p>15 by whether a standard has been incorporated</p> <p>16 by reference or not?</p> <p>17 A. I don't think so.</p> <p>18 Q. Does it break out by whether a</p> <p>19 standard has been publicly made available by</p> <p>20 defendant or not?</p> <p>21 A. I don't think so. Not in</p> <p>22 tabs 3, 4, and 5.</p> <p>23 Q. How do you establish causation</p> <p>24 between defendant's activities and any of the</p> <p>25 data that you provide in section -- in</p> <p>Page 158</p>	<p>1 of certain of the standards. I've</p> <p>2 presented that.</p> <p>3 I don't have direct evidence of</p> <p>4 the precise impact historically of</p> <p>5 defendant's activities on plaintiffs'</p> <p>6 financials.</p> <p>7 BY MR. BRIDGES:</p> <p>8 Q. What evidence of any kind do</p> <p>9 you have of any kind of impact historically</p> <p>10 of the defendant's activities on plaintiffs'</p> <p>11 financials?</p> <p>12 MR. FEE: Objection to form.</p> <p>13 THE WITNESS: That which is</p> <p>14 reported in paragraph 133, that of</p> <p>15 which is contained in deposition</p> <p>16 testimony, and that of which I</p> <p>17 summarized in other parts of the</p> <p>18 report.</p> <p>19 BY MR. BRIDGES:</p> <p>20 Q. So when you're referring to</p> <p>21 deposition testimony, you're referring to the</p> <p>22 citations to the footnotes in paragraph 133?</p> <p>23 A. No, I don't think it's just</p> <p>24 limited to that. I think there's some other</p> <p>25 deposition transcripts that talk about the</p> <p>Page 160</p>
<p>1 paragraph 133?</p> <p>2 MR. FEE: Objection. Calls for</p> <p>3 a legal conclusion. Form.</p> <p>4 THE WITNESS: One can and</p> <p>5 should look at all evidence available,</p> <p>6 including circumstantial evidence. I</p> <p>7 don't have direct information about</p> <p>8 the precise impact of defendant's</p> <p>9 activities, but I have important</p> <p>10 information that bears on that issue,</p> <p>11 including information that's in</p> <p>12 deposition transcripts.</p> <p>13 BY MR. BRIDGES:</p> <p>14 Q. So my question is, how do</p> <p>15 you -- do you -- strike that.</p> <p>16 Are your conclusion -- are you</p> <p>17 making conclusions in paragraph 133 about the</p> <p>18 cause of changes in sales of the plaintiffs'</p> <p>19 products?</p> <p>20 MR. FEE: Objection to form.</p> <p>21 THE WITNESS: Not definitively.</p> <p>22 I have observations about the</p> <p>23 magnitude and trend of the downloads</p> <p>24 of -- through defendant's sites. I</p> <p>25 have some information on the downloads</p> <p>Page 159</p>	<p>1 impact or potential impact of defendant's</p> <p>2 activities on each one of the plaintiffs.</p> <p>3 Q. Did you make any independent</p> <p>4 assessment of causation of any financial</p> <p>5 effects on plaintiffs by the defendant's</p> <p>6 activities?</p> <p>7 MR. FEE: Objection to form.</p> <p>8 Calls for a legal conclusion.</p> <p>9 THE WITNESS: What do you mean</p> <p>10 by the term of "independent assessment</p> <p>11 of causation"?</p> <p>12 BY MR. BRIDGES:</p> <p>13 Q. You, as an expert, not relying</p> <p>14 just on what other people have said or</p> <p>15 speculated or thought.</p> <p>16 MR. FEE: Same objections.</p> <p>17 Plus compound.</p> <p>18 THE WITNESS: We experts rely</p> <p>19 on other information to draw the</p> <p>20 conclusions that we do, and then we</p> <p>21 bring our training to it. So our</p> <p>22 observations shouldn't be in a vacuum.</p> <p>23 BY MR. BRIDGES:</p> <p>24 Q. But they should be objective,</p> <p>25 correct?</p> <p>Page 161</p>

<p>1 A. Yes.</p> <p>2 Q. And that means perhaps not</p> <p>3 relying upon the views of the parties to the</p> <p>4 lawsuit alone, but doing independent analysis</p> <p>5 and research, correct?</p> <p>6 MR. FEE: Objection to form.</p> <p>7 THE WITNESS: I think one can</p> <p>8 and should evaluate and consider the</p> <p>9 views of the parties, but not limited</p> <p>10 investigation to that.</p> <p>11 BY MR. BRIDGES:</p> <p>12 Q. So what independent analysis</p> <p>13 and research did you do other than reviewing</p> <p>14 the views and statements of the parties in</p> <p>15 this case?</p> <p>16 MR. FEE: Objection. Vague.</p> <p>17 THE WITNESS: I reviewed and</p> <p>18 summarized the data, as you see in</p> <p>19 133, that I had at my disposal. I</p> <p>20 reviewed writings about the impacts.</p> <p>21 And I took important</p> <p>22 information from the fact that the</p> <p>23 plaintiffs have brought this lawsuit.</p> <p>24 The plaintiffs don't want this</p> <p>25 activity to continue. That is</p> <p>Page 162</p>	<p>1 A. I took all the data --</p> <p>2 MR. FEE: Objection. Form.</p> <p>3 Objection to form.</p> <p>4 THE WITNESS: I took all this</p> <p>5 data into account. That's why I</p> <p>6 reported it here.</p> <p>7 BY MR. BRIDGES:</p> <p>8 Q. And the data that you</p> <p>9 identified in the footnotes in</p> <p>10 paragraph 134 -- sorry -- 133?</p> <p>11 A. Yes, I considered that</p> <p>12 information.</p> <p>13 Q. Do you know in what year the</p> <p>14 defendant posted the 2008 version of the</p> <p>15 National Electrical Code on its Web site?</p> <p>16 A. I don't know with absolute</p> <p>17 certainty. I do know a number of the alleged</p> <p>18 activities occurred in late 2012. I don't</p> <p>19 know if it's specific to that code or not.</p> <p>20 Q. Does it matter to your analysis</p> <p>21 exactly when the defendant posted the 2008</p> <p>22 National Electrical Code on its Web site or</p> <p>23 to Internet Archive?</p> <p>24 A. I would --</p> <p>25 MR. FEE: Objection to form.</p> <p>Page 164</p>
<p>1 revealed preference information that's</p> <p>2 quite important.</p> <p>3 BY MR. BRIDGES:</p> <p>4 Q. Tell me about what you mean by</p> <p>5 repealed -- sorry. Strike that.</p> <p>6 Tell me what you mean by</p> <p>7 "revealed preference."</p> <p>8 A. What people do often provides</p> <p>9 information on what their preferences are.</p> <p>10 Q. And so the fact that plaintiffs</p> <p>11 brought this lawsuit has revealed to you that</p> <p>12 they prefer to bring the lawsuit, correct?</p> <p>13 MR. FEE: Objection. Vague.</p> <p>14 THE WITNESS: Given the cost,</p> <p>15 they prefer to bring the lawsuit</p> <p>16 rather than not bring it, yes.</p> <p>17 BY MR. BRIDGES:</p> <p>18 Q. What else -- strike that.</p> <p>19 What are the data you're</p> <p>20 referring to in page -- strike that.</p> <p>21 What are the data you're</p> <p>22 referring to in paragraph 133 that you took</p> <p>23 into account in discussing or analyzing</p> <p>24 effects of defendant's activities on</p> <p>25 plaintiffs?</p> <p>Page 163</p>	<p>1 THE WITNESS: I would consider</p> <p>2 that information if I had it, but I</p> <p>3 don't have any reason to think that it</p> <p>4 would change any of the conclusions</p> <p>5 that I drew.</p> <p>6 BY MR. BRIDGES:</p> <p>7 Q. The timing of when the</p> <p>8 defendant posted certain matters wouldn't</p> <p>9 change your conclusions?</p> <p>10 A. Not based on what I know right</p> <p>11 now. My understanding is that much of the</p> <p>12 activity occurred in 2012, the later half of</p> <p>13 2012, and I still have the whole body of</p> <p>14 evidence that I have considered. So I'm not</p> <p>15 sure if the precise timing would change, but</p> <p>16 I certainly would consider that.</p> <p>17 Q. Do you know in what year</p> <p>18 Public.Resource.Org posted the 2011 version</p> <p>19 of the National Electrical Code?</p> <p>20 A. Same answer to the question</p> <p>21 that you had with regard to the 2008 code.</p> <p>22 Q. Can you look at the data in</p> <p>23 your -- the tables attached to your report</p> <p>24 and see if that helps refresh your memory as</p> <p>25 to when the defendant posted NEC 2008 and</p> <p>Page 165</p>

1 NEC -- NEC 2011?
2 A. I can look, and I will.
3 No, it doesn't answer that
4 question, I don't think.
5 Q. Can you make a prediction as to
6 when the defendant posted NEC 2008 and
7 NEC 2011, based on the data attached to your
8 report in Exhibit 1?
9 MR. FEE: Objection to form.
10 THE WITNESS: No, I don't
11 think, based on just those data.
12 BY MR. BRIDGES:
13 Q. Can you make -- give an
14 estimate as to when the defendant posted
15 NEC 2008 and NEC 2011, based on the data
16 attached to your report as Exhibit 1?
17 MR. FEE: Same objection.
18 THE WITNESS: No, I don't
19 think, based on just that information.
20 BY MR. BRIDGES:
21 Q. Well, just looking at your
22 report, can you tell when defendant posted
23 NEC 2008 and NEC 2011?
24 A. My answer hasn't changed. I
25 still don't know precisely when those were

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1 posted.
2 Q. But that doesn't make a
3 difference to your economic analysis of the
4 effects of defendant's activities on the
5 plaintiffs?
6 A. Well, I would be curious --
7 MR. FEE: Objection to form.
8 THE WITNESS: -- curious about
9 that information, but I don't have any
10 reason to think it would change the
11 conclusions that I drew, and that is
12 that a permanent injunction is
13 appropriate here.
14 BY MR. BRIDGES:
15 Q. Is it your job to determine
16 whether a permanent injunction is
17 appropriate? Is that what you were hired to
18 do?
19 A. No.
20 MR. FEE: Objection. Calls for
21 a legal conclusion. Form. Compound.
22 THE WITNESS: I think it's
23 ultimately the Court's decision to
24 make, but I've been asked what my
25 economic view is as to the

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1 appropriateness of a permanent
2 injunction here.
3 BY MR. BRIDGES:
4 Q. Is the appropriate of -- is the
5 appropriateness of a permanent injunction an
6 economic question?
7 A. I think, in part, economic
8 considerations can be and often are taken
9 into account in answering that question.
10 Q. Is it an economic question?
11 MR. FEE: Objection.
12 BY MR. BRIDGES:
13 Q. That was my question.
14 MR. FEE: Asked and answered.
15 THE WITNESS: Again, in part.
16 BY MR. BRIDGES:
17 Q. The propriety of
18 a preliminary -- of a -- strike that.
19 It's your testimony that the
20 propriety of a permanent injunction is, in
21 part, an economic question?
22 MR. FEE: Objection. Asked and
23 answered. Form. Calls for a legal
24 conclusion.
25 THE WITNESS: Yes. As I

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1 understand it, one factor to consider
2 is the reparability or irreparability
3 of harm. I believe, at its core,
4 that's an economic question.
5 BY MR. BRIDGES:
6 Q. And what economic theories did
7 you rely upon to conclude that, as an
8 economic matter, a preliminary -- strike
9 that.
10 What economic theories did you
11 rely upon to conclude that, as an economic
12 matter, a permanent injunction is appropriate
13 in this case?
14 MR. FEE: Same objections.
15 THE WITNESS: I don't know what
16 candidates you have in mind for
17 economic theories.
18 BY MR. BRIDGES:
19 Q. Whichever ones you relied upon.
20 A. I --
21 MR. FEE: Same objections.
22 THE WITNESS: -- used all of my
23 training and applied it to the facts
24 of this case and drew the conclusions
25 that I did.

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<p>1 BY MR. BRIDGES: 2 Q. And are there any particular 3 aspects of training that you have beyond what 4 a first-year college student would have 5 gotten in a first-year economics course that 6 you have brought to bear by applying 7 particular economic theories to this case? 8 A. I think my training makes me 9 who I am and has helped me in assignments 10 like this. I have beyond a first-year-in- 11 college understanding of basic economics, but 12 they're very important concepts that are 13 taught and learned in first-year economics. 14 Q. Well, I want to know if there 15 are any economic concepts beyond first-year 16 economics that you have brought to bear in 17 rendering your conclusions in this case. 18 MR. FEE: Objection to form. 19 Asked and answered. 20 THE WITNESS: Generally, there 21 are, yes. 22 BY MR. BRIDGES: 23 Q. What economic concepts have you 24 brought to bear in your report and analysis 25 in this case?</p> <p style="text-align: right;">Page 170</p>	<p>1 THE WITNESS: We learn about 2 price theory. We learn about consumer 3 behavior. We talk -- we learn about 4 manufacturer and supplier actions. We 5 learn about game theory. We learn 6 about econometrics. We learn more 7 broadly about quantitative methods. 8 We learn about a variety of aspects of 9 industrial organization. There are 10 many things that we learn beyond the 11 first year of economics training. 12 BY MR. BRIDGES: 13 Q. No, I'm asking what you brought 14 to bear in your analysis in this case. 15 A. All those. 16 Q. Okay. What aspect of price 17 theory did you bring to bear in this case? 18 A. I don't know how to answer that 19 question besides I understand basic price 20 theory and have researched it much and 21 applied that to the facts here. 22 Q. What was the specific 23 application of price theory that you brought 24 to bear in this case? 25 A. I can't be any more specific</p> <p style="text-align: right;">Page 172</p>
<p>1 A. I'm sorry, because I don't know 2 what you mean by "economic concepts." We get 3 trained in things like quantitative methods 4 and intermediate microeconomics, in price 5 theory, in econometrics, in consumer 6 behavior. All those things are beyond the 7 first year. I don't know if you're calling 8 those economic theories. Your -- your 9 questioning confuses me. 10 Q. Well, you referred to the 11 important concepts in response to my question 12 to you about particular aspects of training 13 that you have beyond what a first-year 14 college student would have gotten in a 15 first-year economics course that you brought 16 to bear by applying economic theories to this 17 case, and your answer refers to very 18 important concepts that are taught and 19 learned. 20 And so I'm asking you, what 21 very important economic concepts have you 22 brought to bear in your analysis of this 23 case? 24 MR. FEE: Objection to form. 25 Lack of foundation.</p> <p style="text-align: right;">Page 171</p>	<p>1 than that. I don't understand your question. 2 Q. What aspect of training about 3 consumer behavior did you bring to bear in 4 this case? 5 A. I can't be any more specific 6 than saying that. 7 Q. What aspects of your training 8 about game theory have you brought to bear in 9 your work on this case? 10 A. I can't be any more specific 11 than that. 12 Q. What aspects of econometrics in 13 your training have you brought to bear on 14 this case? 15 A. I can't be any more specific 16 than that. 17 Q. What inform -- what aspects of 18 training in qualitative methods have you 19 brought to bear on this case? 20 A. I didn't say "qualitative 21 methods," and so it may have been mis-keyed 22 in. I said "quantitative methods." 23 Q. All right. What aspects of 24 quantitative methods of your training did you 25 bring to bear on this case?</p> <p style="text-align: right;">Page 173</p>

<p>1 A. I can't be any more specific 2 than that. 3 Q. What aspect of your training 4 regarding aspects of industrial organization 5 have you brought to bear on this case? 6 A. I can't be any more specific 7 than that. 8 Q. But you did bring the theory of 9 reveal -- revealed preferences to bear on 10 this case, correct? 11 A. Yes. 12 Q. What other economic theories do 13 you recall bringing to bear on this case? 14 MR. FEE: Objection. Asked and 15 answered. 16 THE WITNESS: Everything that 17 I've -- 18 MR. FEE: And vague. 19 Go ahead. 20 THE WITNESS: -- I've learned 21 in my training, both educational 22 training and career training. 23 BY MR. BRIDGES: 24 Q. Can you be more specific than 25 that?</p> <p>Page 174</p>	<p>1 just on this information. 2 Q. What else would you need? 3 A. I don't know, because I think 4 it's probably a very easy factual question to 5 determine when the downloading first 6 occurred, so I don't know why one would need 7 to back into it. 8 Q. Well, when -- would one be able 9 to use sales trends as a way of identifying 10 likely effects of a posting of each standard 11 by the defendant? 12 MR. FEE: Objection. Vague. 13 Compound. 14 THE WITNESS: Maybe; maybe not. 15 BY MR. BRIDGES: 16 Q. Why do you say "maybe; maybe 17 not"? 18 A. I just wouldn't think to do it 19 that way, so I don't know what you exactly 20 have in mind. 21 Q. Do you associate the posting of 22 standards by defendant with changes in sales 23 volume of the standards that the defendant 24 has posted? 25 MR. FEE: Objection to form.</p> <p>Page 176</p>
<p>1 A. No. 2 * * * 3 (Jarosz Exhibit 4 marked for 4 identification.) 5 * * * 6 BY MR. BRIDGES: 7 Q. Mr. Jarosz, do you recognize 8 Exhibit 4 as a document that you produced in 9 response to a subpoena in this case? 10 A. Yes. 11 Q. What is this document? 12 A. It appears to be a summary over 13 the years 2009 through 2013 of dollars and 14 quantity of NFPA standards that were sold in 15 the marketplace. 16 Q. Based upon the trends that you 17 see in this exhibit, can you estimate when 18 you believe it is most likely that the 19 defendant first published -- strike that. 20 Based upon the trends that you 21 see in this Exhibit 4, can you estimate when 22 you believe it is most likely that the 23 defendant first posted each of the standards 24 identified here? 25 A. I don't think so, not based</p> <p>Page 175</p>	<p>1 THE WITNESS: I don't know what 2 you mean by that question. 3 BY MR. BRIDGES: 4 Q. You don't understand the 5 question? 6 A. I do not. 7 Q. Can you correlate the posting 8 of standards by defendant with any changes in 9 sales volumes of the standards that the 10 defendant has posted? 11 MR. FEE: Objection to form. 12 THE WITNESS: I don't think 13 I've attempted to compute the 14 correlation coefficient here 15 associated with postings. 16 BY MR. BRIDGES: 17 Q. I'm not asking for a specific 18 correlation coefficient. I'm just asking, 19 generally, can you correlate the posting of 20 standards by defendant with any changes in 21 sales volumes of the standards that 22 defendants has -- that the defendant has 23 posted with reference to Exhibit 4? 24 A. I don't know -- 25 MR. FEE: Objection. Form.</p> <p>Page 177</p>

1 THE WITNESS: I don't recall
2 attempting to do that. And I wouldn't
3 necessarily think that the historical
4 impact would -- is the end of the
5 story as to the harm here.
6 BY MR. BRIDGES:
7 Q. Is historical impact part of
8 the story as to the harm here?
9 A. Yes.
10 Q. What -- what can you say by
11 looking at Exhibit 4 about the historical
12 impact of the posting of the defendant -- of
13 the plaintiffs' standards by the defendant?
14 A. I don't know that I can say
15 much, because I believe the postings largely
16 occurred in late 2012, and I only have one
17 period after that.
18 Q. If it turns out that
19 defendant's postings were well before 2012,
20 would that affect your analysis of the trends
21 in sales data of the plaintiffs'
22 publications?
23 MR. FEE: Objection to form.
24 Compound. Vague.
25 THE WITNESS: Maybe. I would

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1 consider that information in
2 conjunction with these data if you
3 wanted me to.
4 BY MR. BRIDGES:
5 Q. How -- what -- what would
6 change?
7 A. I don't know. I haven't done
8 that analysis.
9 Q. Have you verified the dates on
10 which plaintiffs -- strike that.
11 Have you verified the dates at
12 which defendant posted the various standards
13 to its Web site or to Internet Archive?
14 A. I don't --
15 MR. FEE: Objection. Vague.
16 THE WITNESS: I don't recall
17 verifying it.
18 And are you asking did I
19 separately go out and determine what
20 that date is and see if that was the
21 same as what was represented in the
22 Complaint, for instance?
23 BY MR. BRIDGES:
24 Q. Yes.
25 A. No, I don't recall doing that.

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1 Q. Have you determined in any way
2 the dates at which defendant posted various
3 standards to its Web site or to the Internet
4 Archive?
5 A. I don't recall doing a separate
6 analysis of that, no.
7 Q. How did you learn about the
8 dates at which defendant posted various
9 standards to its Web site or to Internet
10 Archive?
11 A. I had conversations with
12 counsel on that topic, and I may have seen
13 that information contained in certain
14 documents like the Complaint, but I don't
15 recall.
16 Q. Did you rely upon information
17 regarding those dates from conversations with
18 counsel?
19 MR. FEE: In arriving at his
20 opinions, you're asking?
21 MR. BRIDGES: Arriving at his
22 understanding of the facts.
23 THE WITNESS: I don't know that
24 I did, because I don't recall
25 reporting those specific dates

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1 anywhere in my report.
2 BY MR. BRIDGES:
3 Q. Do you recall taking specific
4 dates into account in analyzing the effect of
5 defendant's actions?
6 MR. FEE: Objection to form.
7 Vague.
8 THE WITNESS: I don't recall
9 one way or the other.
10 BY MR. BRIDGES:
11 Q. Do you know how -- strike that.
12 Do you know how much revenue
13 each plaintiff derives from the standards at
14 issue in this case?
15 A. I don't think I know that
16 precise number.
17 Q. Did you -- did you ever know
18 that number?
19 A. I don't think so.
20 Q. Did you ever know how much
21 revenue each plaintiff derives from standards
22 that have been incorporated into law?
23 A. As opposed to those that have
24 not been incorporated? Is that --
25 Q. Well, I'm -- I'm asking about

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1 those standards that have been incorporated
2 in the law. I'm asking if you know how much
3 revenue each plaintiffs derives -- each
4 plaintiff derives from those standards.
5 A. I don't --
6 MR. FEE: Objection. Form.
7 THE WITNESS: -- think I know
8 that number, and I'm not sure the
9 plaintiffs know that number.
10 BY MR. BRIDGES:
11 Q. Do you know the percentage of
12 revenue that each plaintiff derives from
13 standards that have been incorporated into
14 law?
15 MR. FEE: Objection to form.
16 THE WITNESS: I don't think I
17 do, and I don't believe the plaintiffs
18 do.
19 BY MR. BRIDGES:
20 Q. Are you aware of any difference
21 in profitability to plaintiffs between those
22 standards that have been incorporated into
23 law and those standards that have not been
24 incorporated into law?
25 MR. FEE: Objection to form.

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1 THE WITNESS: I don't believe
2 so.
3 BY MR. BRIDGES:
4 Q. Do you know -- strike that.
5 Are you aware of any difference
6 in profitability to plaintiffs between those
7 standards that defendant has posted to the
8 Internet and those standards that defendant
9 has not posted to the Internet?
10 MR. FEE: Objection to form.
11 THE WITNESS: I don't believe
12 so. And as with the previous
13 question, I don't think the plaintiffs
14 have that information at their
15 disposal.
16 BY MR. BRIDGES:
17 Q. For each plaintiff, what do you
18 understand to be the percentage of gross
19 revenue from the sale of standards?
20 MR. FEE: Objection to form.
21 THE WITNESS: I -- I've
22 reported that in my report. My memory
23 is that it's something on the order of
24 66 percent for ASTM and for NFPA. And
25 if you add in memberships, it's

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1 something just north of 50 percent for
2 ASHRAE.
3 BY MR. BRIDGES:
4 Q. What do you mean by "if you add
5 in memberships"?
6 A. I'm not -- I'm not quite sure
7 what you're asking me to define.
8 Q. I'm asking you to explain the
9 phrase that you just used, "if you add in
10 memberships." What did that mean?
11 A. I talked about that in my
12 report. Membership fees are a fairly good
13 recollect -- a fairly good reflection of
14 amount that would have been paid for
15 publications. In other words, publication
16 fees -- it -- let me start this over again.
17 It makes about as much sense to
18 become a member of ASHRAE as it is to buy
19 some of the individual publications. As a
20 result, many people choose to become members
21 rather than just buying the publication, as I
22 understand it.
23 Q. How did you learn that?
24 A. Having knowledge of the -- of
25 the price difference and through discussions

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1 with people at ASHRAE.
2 Q. How did you learn about the
3 price difference?
4 A. I don't recall how I learned
5 it, but I report it in my report based on
6 certain documents I've seen. Perhaps I
7 learned it from their Web site.
8 Q. Did you do any surveys of
9 ASHRAE members to validate that assumption?
10 A. I'm sorry. Validate what
11 assumption?
12 Q. About purchase of a membership
13 instead of buying the publication.
14 A. I'm not sure that there's an
15 assumption in there. My understanding is
16 that ASHRAE people are of the belief that
17 many people buy membership rather than
18 individual publications.
19 Q. And in your work, did you
20 assume that?
21 A. I didn't assume that. I worked
22 on that -- under that understanding.
23 Q. Oh, it's an understanding, but
24 not an assumption?
25 A. Yes.

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1 Q. Did that understanding make a
2 difference to your analysis?
3 A. It was a factual underpinning.
4 Q. An underpinning, but not an
5 assumption?
6 A. It was not an explicit
7 assumption.
8 Q. But it was an underpinning, not
9 an assumption, is your testimony?
10 MR. FEE: Objection. Asked and
11 answered.
12 THE WITNESS: Yes. I don't
13 know what or why you're arguing with
14 me on this.
15 BY MR. BRIDGES:
16 Q. I'm not arguing.
17 A. I don't understand.
18 Q. I'm just trying to understand
19 your testimony. That's all. So I'm asking
20 some follow-up questions.
21 You stated earlier some
22 percentages of revenue from the sale of
23 standards. Did you mean to be identifying
24 what you thought were the percentages of
25 revenue from the sale of standards or from

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1 the sale of all publications?
2 A. Let me -- let me double-check
3 that.
4 Well, in the case of ASTM, for
5 instance, I believe it's copyrighted
6 publications.
7 Q. What page are you referring to
8 in your report?
9 A. Right now I'm looking at
10 page 36, but I think I talk about it at other
11 areas.
12 Q. So page 36, you're talking
13 about which paragraph?
14 A. Well, right now I was --
15 Q. 83?
16 A. -- I was looking at 83, but I'm
17 turning back to, for more reliable
18 information, to paragraph 15, for instance,
19 which says in 2014, 67.1 percent of the
20 revenue was generated by the sale of
21 copyrighted publications. For NFPA, that
22 information is shown in paragraph 18. And
23 for ASHRAE, that information is shown in
24 paragraph 22.
25 Q. All three of those references

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1 are to copyrighted publications, correct?
2 A. With the exception of number 3,
3 which refers to copyrighted publications and
4 memberships.
5 Q. Okay. So my question wasn't
6 about copyrighted publications. My question
7 is, what percentage do you understand of
8 plaintiffs' revenues comes from the sale of
9 standards at issue in this case?
10 A. Thank you for that reminder of
11 what the question is.
12 I don't think I know that
13 precise percentage.
14 Q. What percentage of plaintiffs'
15 revenues, to your knowledge, comes from the
16 sale of standards incorporated into law?
17 A. I don't know that number.
18 Q. What percentage of plaintiffs'
19 revenues, to your understanding, comes from
20 the sale of all standards?
21 A. I'm sorry. I thought you asked
22 that question. I thought the immediate one
23 before that was standards.
24 Q. No. It was standards at issue
25 in this case. Then --

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1 A. The one before that.
2 Q. -- standards incorporated into
3 law. And now it's all standards.
4 A. Right. Thank you.
5 I don't know that number
6 either.
7 Q. What percentage of
8 plaintiffs' -- strike that.
9 What dollar value do you
10 associate with the investments that each
11 plaintiff has made in the development of the
12 standards at issue in this case?
13 A. I don't think I attributed a
14 dollar amount to that precise activity,
15 because I don't know that amount.
16 Q. What percentage of plaintiffs'
17 operating expenses do you associate with the
18 plaintiffs' development of the standards at
19 issue in this case?
20 A. I don't think I know that
21 number.
22 Q. What percentage of plaintiffs'
23 operating expenses do you associate with the
24 plaintiffs' development of standards
25 incorporated into law?

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1 A. I don't think I know that
2 number.
3 Q. What percentage of plaintiffs'
4 operating expenses do you associate with the
5 plaintiffs' development of standards
6 generally?
7 A. I don't think I know that
8 number.
9 Q. Do you have any estimates of
10 any of those numbers that you just said you
11 don't think you know?
12 MR. FEE: Objection to form.
13 THE WITNESS: Not sitting here
14 right now.
15 BY MR. BRIDGES:
16 Q. Did you at one point ever
17 determine those numbers?
18 A. Not that I recall.
19 Q. Do you know what percentage of
20 the staff or employees of each plaintiff has
21 worked on the development of standards at
22 issue in this case?
23 MR. FEE: Objection to form.
24 THE WITNESS: I don't think I
25 know that number.

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1 BY MR. BRIDGES:
2 Q. Do you know what percentage --
3 do you have an estimate?
4 A. No.
5 MR. FEE: Objection to form.
6 THE WITNESS: Not as I sit
7 here, no.
8 BY MR. BRIDGES:
9 Q. Do you know what percentage of
10 the staff or employees of each plaintiff has
11 worked on the development of standards
12 incorporated into law?
13 MR. FEE: Objection to form.
14 THE WITNESS: Not as I sit here
15 right now.
16 BY MR. BRIDGES:
17 Q. Do you have an estimate?
18 A. Not as I sit here right now.
19 Q. Do you know what percentage of
20 the staff or employees of each plaintiff has
21 worked on the development of standards in
22 general?
23 A. Not as I sit here right now.
24 Q. Do you have an estimate?
25 A. Not as I sit here right now.

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1 Q. Have you ever had access to any
2 information that I've asked in the last
3 several questions?
4 MR. FEE: Objection to form.
5 THE WITNESS: I don't believe
6 so.
7 BY MR. BRIDGES:
8 Q. Do you know whether plaintiffs
9 prepare standards through joint sponsorship
10 with any other organizations?
11 MR. FEE: Objection. Vague.
12 THE WITNESS: I think I may
13 have seen a reference to that. I
14 don't know the extent to which it
15 occurs, but I wouldn't be surprised to
16 be reminded that it does occur.
17 BY MR. BRIDGES:
18 Q. Are you aware of any, as you
19 sit here?
20 A. Not as I sit here right now,
21 but I think I'm aware that it has occurred.
22 Q. Do you know whether plaintiffs
23 receive grants, revenue, or stipends from
24 governments that use, reference, or adopt
25 their standards?

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1 MR. FEE: Objection to form.
2 THE WITNESS: There are grant
3 monies that go to NFPA. I don't know
4 the source of those grants. I don't
5 see a line for grant revenues for the
6 other two organizations.
7 BY MR. BRIDGES:
8 Q. Did you ask any of the
9 plaintiffs about the revenues or expenses
10 they have specifically attributable to the
11 standards that defendant has posted to the
12 Internet?
13 MR. FEE: Objection to form.
14 THE WITNESS: We generally
15 talked about that topic with each
16 plaintiff, and I don't think the
17 plaintiffs know that amount. They
18 undertake activities that are
19 standards oriented. They don't know
20 which of those standards will be
21 incorporated by reference.
22 BY MR. BRIDGES:
23 Q. Did you --
24 A. Or which have been. I don't
25 think they systematically track those.

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<p>1 documents, but they provided them as 2 part of the discovery process. 3 BY MR. BRIDGES: 4 Q. Did you ask them for any 5 documents that they had not provided? 6 A. I think we generally described 7 the kinds of information that we find useful 8 or typically find useful in matters like 9 this. 10 Q. After you received documents 11 from plaintiffs' counsel, did you ask them 12 for any more? 13 A. That -- that's possible. I 14 don't recall that. 15 Q. You don't recall. Did you -- 16 do you have any understanding as to the 17 dollar value of staff time and expenses that 18 the plaintiffs have incurred in promoting 19 incorporation of their standards into law? 20 MR. FEE: Objection to form. 21 Lack of foundation. 22 THE WITNESS: I don't think I 23 have that number, no. 24 BY MR. BRIDGES: 25 Q. Do you have an estimate?</p> <p>Page 198</p>	<p>1 A. I looked at some parts of it. 2 I don't recall that I looked at all aspects 3 of the database. 4 Q. Did you verify how many 5 standards were incorporated by reference 6 according to that database? 7 A. No, I did not. 8 Q. What do you mean by, "This 9 database reports nearly 13,000 instances of 10 incorporation by reference"? 11 A. I don't know what you're asking 12 me to define. 13 Q. I'm not asking you to define 14 anything. I'm asking you to explain what you 15 meant by that clause, "This database 16 reports" -- 17 A. I'm sorry. I'm just -- I'm 18 going to be just rearranging words a little 19 bit. There were 13,000 times that there was 20 incorporation by reference of a standard. 21 I -- I don't -- I'm sorry. I 22 don't understand what your confusion is. 23 Q. I'm not confused. I'm just 24 asking you questions. Okay? So please don't 25 understand -- please don't assume that I'm</p> <p>Page 200</p>
<p>1 MR. FEE: Same objections. 2 THE WITNESS: Not as I sit here 3 now, no. 4 BY MR. BRIDGES: 5 Q. Did you discuss that issue with 6 anyone representing the plaintiffs? 7 MR. FEE: Same objections. 8 THE WITNESS: It's possible, 9 but I don't recall having that 10 discussion. 11 BY MR. BRIDGES: 12 Q. In paragraph 57 of your report, 13 you refer to "thousands of private-sector 14 standards." Was your sole support for the 15 statement in paragraph 57 the Bremer article 16 you cited in footnote 88? 17 A. No. You see I discuss and 18 provide support for that in subsequent 19 paragraphs in that section. 20 Q. And that includes in 21 paragraph 58? 22 A. Yes. 23 Q. And did you review the 24 Standards Incorporated by Reference Database 25 that you refer to in paragraph 58?</p> <p>Page 199</p>	<p>1 confused. I'm trying to understand what you 2 meant by that. 3 You mean separate instances? 4 You mean separate laws? What do you mean? 5 A. Yes. Separate instances slash 6 separate laws. 7 Q. What did you count as an 8 instance? 9 A. Mention in a particular law of 10 a standard. 11 Q. Did you or anybody working with 12 you attempt to determine the number of 13 standards that those 13,000 instances of 14 incorporation by reference referred to? 15 A. Not entirely. But if you read 16 on that -- in that same section, it talks 17 about the number of ASTM standards, the 18 numbers of -- the number of NFPA standards, 19 and the number of ASHRAE standards. 20 Q. Well, please tell me where it 21 refers to the number of standards. 22 A. It says, "Including more than 23 2,400 instances involving ASTM standards." 24 So you're right. It doesn't 25 have the number of standards. It just has</p> <p>Page 201</p>

1 mentions of standard. You're absolutely
2 right.
3 Q. And the same thing is true of
4 the NFPA standards and ASHRAE standards?
5 A. You're absolutely right, yes.
6 Q. Do you know how many standards
7 that database shows as having been
8 incorporated by reference?
9 A. Not sitting here right now.
10 One could perhaps look at what I cited to
11 answer that question, but I don't know right
12 now.
13 Q. Do you know whether anyone
14 working for you ever did that work to make
15 that determination?
16 A. I don't recall that being done.
17 Q. Paragraph 59, you say, "At the
18 state level, privately-developed standards
19 are incorporated by reference as part of the
20 exercise of a range of governmental
21 functions."
22 Do you see that?
23 A. Yes.
24 Q. What do you mean by
25 "governmental functions" in that statement?
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1 A. Things that government agencies
2 do.
3 Q. And you give a couple of
4 examples, but speaking broadly, what are
5 governmental functions that involve
6 incorporation by reference of privately
7 developed standards at the state level?
8 MR. FEE: Objection to form.
9 THE WITNESS: I can only answer
10 generally. Health and human services,
11 things that are related to that,
12 safety, driving rules and regulation.
13 Those are among the things that come
14 to mind.
15 BY MR. BRIDGES:
16 Q. What are the governmental
17 functions related to health and human
18 services that you have in mind?
19 A. I don't have any particular
20 ones in mind.
21 Q. What are the governmental
22 functions relating to safety that you have in
23 mind?
24 A. I don't have any particular
25 ones in mind.
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1 Q. What are the governmental
2 functions with respect to driving that you
3 have in mind?
4 A. I don't have any particular
5 ones in mind.
6 Q. In paragraph 59, you say, "At
7 least 44 states and territories have adopted
8 ASHRAE 90.1 as part of the commercial
9 building energy code."
10 Do you see that?
11 A. Yes, I do.
12 Q. And that also has footnote 95
13 associated with that as well, correct?
14 A. Yes, that's correct.
15 Q. How do you explain the fact
16 that that reference in footnote 95 shows that
17 those 44 states, in fact, adopted the
18 International Energy Conservation Code that
19 merely has a reference to an option to use
20 ASHRAE 90.1?
21 MR. FEE: Objection. Lack of
22 foundation.
23 THE WITNESS: I don't have any
24 explanation for that.
25 BY MR. BRIDGES:
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1 Q. Did you verify that?
2 A. I did not, no.
3 Q. Who did?
4 A. I'm sorry. Who verified what?
5 Q. On what -- on what did you rely
6 to make that statement with that footnote?
7 A. I may not understand your
8 question. I relied on what's identified in
9 footnote 95.
10 Q. But you didn't review foot --
11 what's in footnote 95, right?
12 MR. FEE: Objection. Lack of
13 foundation.
14 THE WITNESS: I did.
15 BY MR. BRIDGES:
16 Q. You -- you reviewed that Web
17 site?
18 A. Yes.
19 Q. Personally?
20 A. Yes, I believe so.
21 Q. Do you have an explanation as
22 to why the resource cited in footnote 95
23 actually shows that the 44 states adopted the
24 International Energy Conservation Code?
25 MR. FEE: Objection. Lack of
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1 Q. What other benefits do
2 plaintiffs gain from incorporation by
3 reference of their standards?
4 A. I think that generally covers
5 it. I may be forgetting things that are laid
6 out in my report, but that's what covers it,
7 to the best of my memory right now.
8 Are we at a good point for a
9 break?
10 Q. If you want. Sure.
11 A. Thanks.
12 THE VIDEOGRAPHER: Off the
13 record at 3:12. This is the end of
14 media unit number 2.
15 * * *
16 (Recess from 3:12 p.m. to
17 3:41 p.m.)
18 * * *
19 THE VIDEOGRAPHER: On the
20 record at 3:41. This is the beginning
21 of media unit number 3 in the
22 deposition of John Jarosz.
23 * * *
24 (Jarosz Exhibit 5 marked for
25 identification.)

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1 * * *
2 BY MR. BRIDGES:
3 Q. Mr. Jarosz, I've handed you
4 Exhibit 5. This is an article that you cited
5 in your report, correct?
6 A. Yes, I believe so.
7 Q. Do you recall how this article
8 came to your attention?
9 A. I do not.
10 Q. Is this an article that you
11 understand to have been published by
12 plaintiff ASHRAE in its journal?
13 A. Yes, that's my understanding.
14 Q. And this is an article you
15 relied upon with respect to the development
16 of standard 90, which became standard 90.1,
17 correct?
18 A. Yes.
19 Q. In paragraph 133 of your
20 report, you talk about a number of
21 downloads -- strike that -- you talk about a
22 number of documents accessed through Public
23 Resource's Web site. Do you see that?
24 A. I talk about the number of ASTM
25 documents that are -- that were accessed over

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1 a particular period.
2 Q. And then you do the same for
3 NFPA documents, correct?
4 A. Yes.
5 Q. What do you calculate as the
6 dollar value of harm to the -- to ASTM from
7 the accesses and downloads that you refer to
8 in paragraph 133?
9 A. I haven't calculated that harm.
10 Q. Why not?
11 A. I'm not sure if I can at this
12 stage. One estimate would be those number of
13 downloads times the -- well, actually, no,
14 let me take that back. I just don't know how
15 to do it.
16 Q. Can you be certain that these
17 accesses or down -- and downloads referred to
18 in paragraph 133, in fact, resulted in
19 economic loss to ASTM?
20 MR. FEE: Objection to form.
21 THE WITNESS: Not with absolute
22 certainty, but with reasonable
23 certainty I can say some -- in some
24 number of these instances, it's likely
25 the case that the -- that the

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1 information would have been obtained
2 from ASHRAE in -- or ASTM, rather,
3 in -- through legal means.
4 BY MR. BRIDGES:
5 Q. Would that -- in those
6 instances where you say that the information
7 would have been obtained from ASTM through
8 legal means, can you put a dollar value on --
9 or even an estimate of the increased revenue
10 that ASTM would have gotten from those
11 instances where people obtained the
12 information from ASHRAE -- sorry -- from
13 AST --
14 MR. FEE: Object --
15 BY MR. BRIDGES:
16 Q. -- from ASTM?
17 MR. FEE: Objection to form.
18 THE WITNESS: No, not based on
19 the information I have. I don't think
20 I have any indication of who was doing
21 the downloading and why.
22 BY MR. BRIDGES:
23 Q. And do you know what
24 alternatives persons who were doing the
25 downloading may have had for obtaining the

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<p>1 information?</p> <p>2 A. Not with certainty, because I</p> <p>3 don't know who those persons were, but I</p> <p>4 would expect one alternative would be to</p> <p>5 obtain it properly, directly from ASTM.</p> <p>6 Q. Would that have resulted in</p> <p>7 more revenue to ASTM?</p> <p>8 A. It may have. If they're</p> <p>9 materials that were taken improperly that</p> <p>10 would have been paid for, then that would</p> <p>11 represent a loss of revenue to ASTM.</p> <p>12 Q. Do you know whether any of the</p> <p>13 persons who obtained this information from</p> <p>14 defendant would have paid for the information</p> <p>15 from ASTM?</p> <p>16 A. No, not with certainty, because</p> <p>17 I don't know the identity of the downloaders</p> <p>18 or the reasons for their downloading.</p> <p>19 Q. Moreover, those persons might</p> <p>20 have accessed the standards from ASTM's</p> <p>21 reading room for free and with no revenue to</p> <p>22 ASTM, correct?</p> <p>23 A. You mean in a but-for world?</p> <p>24 Had they not done what they actually did,</p> <p>25 alternatively they could have gone to the</p> <p style="text-align: right;">Page 214</p>	<p>1 more extended use of that document.</p> <p>2 Q. Do you have any evidence about</p> <p>3 wide distribution of plaintiffs' standards as</p> <p>4 a consequence of defendant's actions?</p> <p>5 A. I do not.</p> <p>6 Q. Have you reviewed any studies</p> <p>7 that would allow you to establish any</p> <p>8 connection between the number of accesses or</p> <p>9 downloads that Public Resource made possible</p> <p>10 and any financial harms to the plaintiffs?</p> <p>11 MR. FEE: Objection to form.</p> <p>12 THE WITNESS: I don't think</p> <p>13 I've seen any study on that, no.</p> <p>14 BY MR. BRIDGES:</p> <p>15 Q. Have you conducted any studies</p> <p>16 that would have allowed you to establish any</p> <p>17 connection between the number of accesses or</p> <p>18 downloads that Public Resource made possible</p> <p>19 and any financial harms to the plaintiffs?</p> <p>20 MR. FEE: Objection to form.</p> <p>21 THE WITNESS: Not other than</p> <p>22 what's contained in my report.</p> <p>23 BY MR. BRIDGES:</p> <p>24 Q. Please turn to page 45,</p> <p>25 paragraph 107, which spills into page 108.</p> <p style="text-align: right;">Page 216</p>
<p>1 free reading room?</p> <p>2 Q. Right.</p> <p>3 A. That's a possibility, yes.</p> <p>4 Q. Do you have an understanding as</p> <p>5 to why persons would want to download a file</p> <p>6 of a standard instead of viewing it at one of</p> <p>7 the plaintiffs' reading rooms?</p> <p>8 A. Not with absolute certainty,</p> <p>9 but I would imagine downloading would allow</p> <p>10 more flexibility in referring to the standard</p> <p>11 and using it and sharing that information</p> <p>12 with others, whereas reading it in -- through</p> <p>13 an Internet site is somewhat less flexible,</p> <p>14 provides less flexibility for the use of that</p> <p>15 information.</p> <p>16 Q. What did -- what do you</p> <p>17 understand to be the difference in</p> <p>18 flexibility between possession of a download</p> <p>19 and access to a standard through a reading</p> <p>20 room?</p> <p>21 A. Well, I think that a download</p> <p>22 typically has a document that's in hard-copy</p> <p>23 form. Copies can made -- be made of that and</p> <p>24 distributed. Reading things just online</p> <p>25 doesn't allow for the wide distribution and</p> <p style="text-align: right;">Page 215</p>	<p>1 MR. FEE: Page 108?</p> <p>2 THE WITNESS: I'm sorry.</p> <p>3 Page 108 or paragraph?</p> <p>4 BY MR. BRIDGES:</p> <p>5 Q. I'm sorry. Paragraph -- strike</p> <p>6 that.</p> <p>7 Let me ask you to turn</p> <p>8 paragraph 107 on pages 45 to 46.</p> <p>9 A. Okay. I'm there.</p> <p>10 Q. I just want to make sure I</p> <p>11 understand your language correctly at the</p> <p>12 bottom of page 45 and the top of page 46.</p> <p>13 Is it your opinion that the</p> <p>14 copyright that the plaintiffs assert in their</p> <p>15 standards drives sales of other publications</p> <p>16 other than the standards themselves?</p> <p>17 MR. FEE: Objection. Form.</p> <p>18 Vague.</p> <p>19 THE WITNESS: I think they're</p> <p>20 important for driving sales of</p> <p>21 publications that embody those</p> <p>22 standards. I don't know that I've</p> <p>23 drawn a conclusion that it drives the</p> <p>24 sale of other products, but that makes</p> <p>25 some sense.</p> <p style="text-align: right;">Page 217</p>

<p>1 BY MR. BRIDGES: 2 Q. Well, doesn't that sentence at 3 the bottom of 45 and going on to 46 say that 4 copyright on plaintiffs' standards drive 5 sales of "handbooks that provide commentary 6 on the standards by referring to them"? 7 A. You haven't read -- 8 MR. FEE: Objection. 9 Mischaracterizes the document. 10 THE WITNESS: You haven't read 11 the whole sentence. I see that 12 sentence to which you refer. 13 BY MR. BRIDGES: 14 Q. Right. I know I haven't read 15 the whole sentence, but didn't I fairly 16 capture one part of it, which is the sales 17 of -- strike that -- that copyright on 18 plaintiffs' standards drives sales of, among 19 other things, "handbooks that provide 20 commentary on standards by referring to 21 them"? 22 MR. FEE: Same objection. 23 THE WITNESS: I think you have 24 generally paraphrased it accurately, 25 yes.</p> <p style="text-align: right;">Page 218</p>	<p>1 whether plaintiffs have copyright in -- 2 rights in their value-added publications? 3 MR. FEE: Objection. Vague. 4 THE WITNESS: I would be 5 curious to know that, but I'm not sure 6 of the significance. I don't think it 7 would change my conclusions, but I 8 would be curious to know that. 9 BY MR. BRIDGES: 10 Q. Do you know whether 11 incorporation into law drives -- strike that. 12 Do you know whether 13 incorporation into law of plaintiffs' 14 standards drives sales of plaintiffs' 15 standards? 16 MR. FEE: Objection to form. 17 Vague. 18 THE WITNESS: I don't know with 19 absolute certainty, but it would make 20 some sense to me. 21 BY MR. BRIDGES: 22 Q. Is it your understanding that 23 it does? 24 MR. FEE: Same objection. 25 THE WITNESS: It would make</p> <p style="text-align: right;">Page 220</p>
<p>1 BY MR. BRIDGES: 2 Q. And that plaintiffs' copyright 3 protection -- this is the top of -- strike 4 that. 5 And turning to the top of 6 page 46, plaintiffs' copyright protection on 7 their standards provides plaintiff with a 8 competitive advantage with respect to what 9 you call value-added publications, correct? 10 A. You've read part of a sentence, 11 but I do see that sentence, yes. 12 Q. And I've fairly paraphrased it 13 correctly, correct? 14 MR. FEE: Objection to form. 15 THE WITNESS: I think, 16 generally, yes. 17 BY MR. BRIDGES: 18 Q. Do plaintiffs, to your 19 understanding, have separate copyrights in 20 those value-added publications, such as 21 commentaries and handbooks? 22 A. I don't know. 23 Q. You don't know? 24 A. Correct. I do not know. 25 Q. Is it important to you to know</p> <p style="text-align: right;">Page 219</p>	<p>1 some sense to me, yes. 2 BY MR. BRIDGES: 3 Q. Are you aware that, in some 4 instances, at least one plaintiff uses the 5 legal status of its code to promote the sale 6 of handbooks? 7 MR. FEE: Objection to form. 8 THE WITNESS: I don't know one 9 way or the other. I don't have reason 10 to dispute it, but there's not a 11 particular instance that comes to mind 12 right now. Maybe you have something 13 to refresh my memory. 14 BY MR. BRIDGES: 15 Q. Can you provide a dollar value 16 benefit that plaintiffs receive economically 17 from the incorporation of their standards by 18 reference? 19 MR. FEE: Objection. Vague. 20 Form. 21 THE WITNESS: I want to make 22 sure that I'm understanding. Could 23 you read that back, please? 24 BY MR. BRIDGES: 25 Q. I'll restate it.</p> <p style="text-align: right;">Page 221</p>

1 Can you provide a -- can you
2 put a dollar value, even an estimate, on the
3 economic benefit that plaintiffs receive from
4 incorporation of their standards into law?
5 MR. FEE: Objection to form.
6 THE WITNESS: I have not. And
7 I'm not sure how one would do that,
8 subject to thinking more about it.
9 BY MR. BRIDGES:
10 Q. At the top of page 46, you say,
11 "The Plaintiffs' copyright protection on
12 their privately-developed standards provides
13 a competitive advantage with regard to the
14 sale of these value-added publications as the
15 copyright protection limits the ability of
16 others to sell those publications unless they
17 are unwilling [sic] to compensate the
18 Plaintiffs for such use."
19 MR. FEE: Objection.
20 Mischaracterizes the statement.
21 BY MR. BRIDGES:
22 Q. Is there something unfair about
23 my characterization of that statement?
24 A. I think you read it wrong. You
25 read "willing" to read "unwilling" for some

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1 reason.
2 Q. Oh, I'm sorry. Thank you.
3 I'll restate the sentence.
4 "In particular, the Plaintiffs'
5 copyright protection on their
6 privately-developed standards provides a
7 competitive advantage with regard to the sale
8 of these value-added publications as the
9 copyright protection limits the ability of
10 others to sell those publications unless they
11 are willing to compensate the Plaintiffs for
12 such use."
13 Do you see that statement?
14 A. I do, yes.
15 Q. And the competitive advantage
16 you've identified there, whom do you
17 understand to be the competition?
18 A. Other potential providers of
19 these so-called value-added publications.
20 Q. And what -- when you say
21 "value-added publications," please give me
22 more examples of what types of things fall
23 into that category, as you use the term.
24 A. Examples would be handbooks
25 that provide commentary on the standards.

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1 Q. What else?
2 A. That's what comes to mind.
3 Q. Anything else?
4 A. Not this moment, no. I guess,
5 potentially, when I think some more about it,
6 training and seminars, for instance.
7 Q. Providers of training and
8 seminars?
9 A. Yes. So that's broader than
10 value-added publications, but there are
11 potentially alternative providers of training
12 and seminars.
13 Q. In paragraph 109, you say, "In
14 addition to direct sales of copyrighted
15 materials, the Plaintiffs' materials
16 associated with their privately-developed
17 standards provide a competitive advantage
18 with regard to the sale of downstream
19 ancillary/complementary services and
20 products."
21 Do you see that?
22 A. Yes. That's what I had in
23 mind.
24 Q. And who are the competitors you
25 have in mind in paragraph 109?

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1 A. I don't know particular names,
2 but -- at least I don't recall any sitting
3 right now -- sitting here right now, but I
4 think there are other providers of these
5 downstream services and products.
6 Q. And please give me examples of
7 what you're calling "downstream services and
8 products."
9 A. Again, seminars and training,
10 for instance.
11 Q. Anything else?
12 A. That's what comes to mind right
13 now.
14 Q. Turning to paragraph 110, you
15 state, "I understand that the ability to
16 control these downstream products and
17 services is particularly important to the
18 Plaintiffs here because the barriers to entry
19 in the marketplace for downstream products,
20 such as training and user manuals, are
21 relatively low. For example, according to
22 Mr. Comstock of ASHRAE, it is relatively easy
23 for unauthorized instructors to read a
24 standard and become (or think that they have
25 become) qualified to provide training or

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1 guidance on that standard."
2 Do you see that?
3 A. I do, yes.
4 Q. What do you understand -- what
5 did you mean by "unauthorized instructors"?
6 A. People that have provided or
7 trying to provide services to the marketplace
8 that have not been explicitly approved by,
9 for instance, ASHRAE.
10 Q. What do you understand the --
11 the nature of -- strike that.
12 You called them "instructors,"
13 correct?
14 A. Yes.
15 Q. Does that mean that you
16 envision that these persons are providing
17 some kind of instruction?
18 A. Yes.
19 Q. What instruction do you
20 understand -- what instruction did you have
21 in mind when you referred to "unauthorized
22 instructors"?
23 A. Generally, how best to
24 implement standards or provisions of certain
25 standards.

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1 Q. What else?
2 A. Nothing else comes to mind
3 right now.
4 Q. Would your understanding of
5 "unauthorized instructors" include persons
6 who were instructing the public as to what
7 the standards require?
8 MR. FEE: Objection to form.
9 Vague.
10 THE WITNESS: I didn't have
11 that in mind. I guess that's a
12 possibility.
13 BY MR. BRIDGES:
14 Q. And would it be relatively easy
15 for unauthorized persons like that to read a
16 standard and think that they have become
17 qualified to provide training or guidance on
18 that standard?
19 MR. FEE: Objection. Vague.
20 BY MR. BRIDGES:
21 Q. Is that your understanding?
22 A. According to Mr. Comstock, I
23 believe that's correct.
24 Q. What do you believe?
25 A. I have no reason to doubt him.

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1 Q. You're just parroting what
2 Mr. Comstock said, or did you have an
3 independent view?
4 A. No, I heard what he said, and
5 it made sense to me.
6 Q. So you put it in your report?
7 A. Yes.
8 Q. What independent thought or
9 investigation did you do before you put that
10 in your report?
11 MR. FEE: Objection. Vague.
12 Compound.
13 THE WITNESS: I can't point to
14 anything in particular.
15 BY MR. BRIDGES:
16 Q. Would a law-school course on
17 the law and regulation of building
18 construction provide instruction to law
19 students?
20 MR. FEE: Objection. Vague.
21 Calls for speculation.
22 THE WITNESS: I guess it could.
23 I have a hard time imagining there
24 would be much demand for such a
25 course, but I'm in general agreement

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1 that that, in concept, could occur.
2 BY MR. BRIDGES:
3 Q. Would it be possible to
4 envision that, in the course of such
5 teaching, a teacher may wish to analyze some
6 of plaintiffs' standards that have been
7 incorporated into law as law and as
8 regulation?
9 MR. FEE: Objection. Calls for
10 speculation. Vague. Form.
11 THE WITNESS: I guess that's
12 possible, but I would expect a law
13 professor would be talking about legal
14 implications, not the technical
15 aspects of a standard. I think they
16 might talk about the implication in a
17 business that's different from a
18 vendor business.
19 BY MR. BRIDGES:
20 Q. Well, what about the legal
21 implications of a code for contractors?
22 MR. FEE: Objection.
23 BY MR. BRIDGES:
24 Q. Is that -- is that fair ground
25 for a law professor to discuss with law

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1 Q. You can't point to any
2 particular investigation or fact that you're
3 relying on in paragraphs 117 to 119?
4 MR. FEE: Objection to form.
5 Asked and answered.
6 THE WITNESS: Everything that's
7 embedded in Exhibit 1 is, in part, a
8 basis for the observations that I draw
9 in those paragraphs.
10 BY MR. BRIDGES:
11 Q. What probability do you assign
12 to your prediction in the first sentence of
13 paragraph 119?
14 MR. FEE: Objection. Form.
15 Lack of foundation.
16 THE WITNESS: I'm not sure that
17 I've used the term "prediction," but I
18 wouldn't assign a particular
19 quantitative probability.
20 BY MR. BRIDGES:
21 Q. Can you give an estimate?
22 A. No.
23 Q. Why not?
24 A. I don't have a basis for that
25 estimate. I have reasoning underlying it,

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1 but I don't have a basis to provide a
2 quantitative estimate of my level of
3 confidence.
4 Q. You refer to "uncertainties" in
5 the second sentence of paragraph 119,
6 correct?
7 A. I do, yes.
8 Q. What probability do you assign
9 to the likelihood that you refer to with the
10 word "likely" in the first sentence of
11 paragraph 120?
12 MR. FEE: Objection. Form.
13 Lack of foundation.
14 THE WITNESS: I don't have a
15 particular quantitative measure of
16 that. And are you referring to my use
17 of the term "likely"?
18 BY MR. BRIDGES:
19 Q. Yes.
20 A. Yes, I don't have a particular
21 quantification of that.
22 Q. What particular facts are you
23 relying on for that paragraph?
24 A. Everything that you see
25 reported in Exhibit 1.

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1 Q. What probability do you assign
2 to the likelihood that you refer to in the
3 first sentence of paragraph 121?
4 MR. FEE: Objection to form.
5 Lack of foundation.
6 THE WITNESS: I don't have a
7 particular quantitative likelihood
8 measure.
9 BY MR. BRIDGES:
10 Q. Can you give an estimate?
11 MR. FEE: Same objection.
12 THE WITNESS: No.
13 BY MR. BRIDGES:
14 Q. Turning to paragraph 126, you
15 refer to an "option available to Plaintiffs
16 to respond to the loss of protection for
17 incorporated standards."
18 Is it your belief that, if the
19 plaintiffs lose this case, they will shut
20 down their creation of new standards?
21 A. I think that's a possibility.
22 Q. What probability do you assign
23 to that?
24 MR. FEE: Objection to form.
25 Lack of foundation.

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1 THE WITNESS: I don't have a
2 particular quantitative measure of
3 probability for that.
4 BY MR. BRIDGES:
5 Q. What's your best estimate?
6 MR. FEE: Same objection.
7 THE WITNESS: I don't have a
8 quantitative best estimate.
9 BY MR. BRIDGES:
10 Q. Is it more or less than
11 50 percent?
12 MR. FEE: Same objections.
13 THE WITNESS: I still don't
14 have a quantitative estimate.
15 BY MR. BRIDGES:
16 Q. Is it more or less than
17 80 percent?
18 MR. FEE: Same objections.
19 THE WITNESS: Still don't have
20 a quantitative estimate.
21 BY MR. BRIDGES:
22 Q. Is it more or less than
23 5 percent?
24 MR. FEE: Same objections.
25 THE WITNESS: Still don't have

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<p>1 a quantitative estimate. I think that 2 there -- with reasonable probability I 3 can draw this conclusion, but I can't 4 be any more precise than that. 5 BY MR. BRIDGES: 6 Q. What do you mean, "with 7 reasonable probability"? 8 A. Based on the information that I 9 have and the training and logic I bring to 10 it, I think there is a -- I say with some 11 confidence what I have said here. 12 Q. And when you say "likely," do 13 you mean more than 50 percent likely? 14 A. Not necessarily, no. 15 Q. Are you aware of other 16 standards development organizations active in 17 the same field as the plaintiffs? 18 MR. FEE: Objection. Vague. 19 Form. 20 THE WITNESS: Perhaps you could 21 tell me what you have in mind with 22 your use of the term "fields." 23 BY MR. BRIDGES: 24 Q. Well, are you familiar with 25 AHRI?</p> <p style="text-align: right;">Page 238</p>	<p>1 to see what alternatives there are among 2 standards development organizations currently 3 in existence to carry forward the work of 4 plaintiffs if plaintiffs chose to stop 5 standards development as a result of the loss 6 of this case? 7 MR. FEE: Same objection. 8 THE WITNESS: Not that I 9 recall, but I am of the understanding 10 that each SDO has a different charter, 11 so I don't know that any SDO has an 12 identical charter to that of any of 13 the three plaintiffs. 14 BY MR. BRIDGES: 15 Q. Are you aware that these 16 plaintiffs compete with other SDOs in the 17 creation of standards in particular fields? 18 MR. FEE: Objection to form. 19 Vague. 20 THE WITNESS: What do you mean 21 by the term "compete with" in this 22 context? 23 BY MR. BRIDGES: 24 Q. That they consider others 25 rivals for the same market, in part.</p> <p style="text-align: right;">Page 240</p>
<p>1 A. I have perhaps seen reference 2 to that. 3 Q. Do you know with which of these 4 plaintiffs it -- do you -- do you know what 5 field it's in? 6 A. I don't recall, sitting here 7 right now, no. 8 Q. Are you familiar with NFRC? 9 A. I may have seen reference to 10 that acronym. 11 Q. Do you know what field it's in? 12 A. Not sitting here right now. 13 Q. Are you familiar with ICC? 14 A. I have seen reference to that. 15 I don't recall what it is, sitting here now. 16 Q. Do you know whether other 17 standards developments organizations would be 18 in a position to step forward and to continue 19 the maintenance and preservation and further 20 development of the standards of plaintiffs 21 here if plaintiffs lose this case? 22 MR. FEE: Objection to form. 23 THE WITNESS: I don't know. 24 BY MR. BRIDGES: 25 Q. Have you done any investigation</p> <p style="text-align: right;">Page 239</p>	<p>1 MR. FEE: Objection to form. 2 Vague. 3 THE WITNESS: I don't recall 4 seeing reference to that, but my 5 memory is not perfect. 6 BY MR. BRIDGES: 7 Q. The -- in paragraph 131, you 8 say, "Simply put, freely-distributed, 9 unrestricted versions of Plaintiffs' 10 standards that are or could be incorporated 11 by reference can be expected to adversely 12 impact the market for Plaintiffs' standards 13 that are incorporated by reference and to 14 displace sales of these standards by the 15 Plaintiffs - which can be expected to have a 16 material adverse effect on Plaintiffs' 17 revenues." 18 Do you see that? 19 A. Yes. 20 Q. By "expected," do you mean more 21 than 50 percent likely? 22 A. Not necessarily. I don't have 23 a quantitative assessment of what I mean by 24 "expected." 25 Q. Do you mean more than 5 percent</p> <p style="text-align: right;">Page 241</p>

<p>1 new in terms of a theory. 2 Q. Do you have the same answer 3 with respect to -- strike that. 4 What facts do you have -- 5 strike that. 6 What facts are you aware of to 7 disprove -- to disprove Mr. Malamud's theory 8 that you refer to in paragraph 144? 9 A. Again, it's the same theory 10 that's being referenced, but there's 11 additional facts; and that is, the downstream 12 products and services aren't particularly 13 substantial to these plaintiffs and don't 14 appear to be enhanced by a lack of copyright 15 protection; that is, the plaintiffs have had 16 copyright protection and have said -- had 17 some downstream products and services. It's 18 hard to imagine that elimination of that 19 copyright protection will enhance that 20 business. 21 Q. It's hard to imagine, but are 22 you aware of any studies to disprove 23 Mr. Malamud's theory? 24 A. No. 25 MR. FEE: Objection. Vague.</p> <p style="text-align: right;">Page 246</p>	<p>1 rest of that paragraph? 2 MR. FEE: Objection. Vague. 3 THE WITNESS: I looked at the 4 financial information, and I talked to 5 people at the various plaintiffs. 6 BY MR. BRIDGES: 7 Q. You talked to people at the 8 various plaintiffs? 9 A. Yes. 10 Q. What did you do to verify the 11 truth and accuracy of the things that various 12 plaintiffs said to you in their 13 conversations? 14 MR. FEE: Objection to form. 15 THE WITNESS: I looked at the 16 financial information, and I kept my 17 eyes and mind open to the information 18 in the rest of the record to determine 19 if it conflicted with what I learned 20 from the company personnel. 21 BY MR. BRIDGES: 22 Q. Whose financial information did 23 you look at? 24 A. All three of the plaintiffs. 25 It's summarized in tabs 3, 4, and 5.</p> <p style="text-align: right;">Page 248</p>
<p>1 THE WITNESS: I'm sorry. 2 BY MR. BRIDGES: 3 Q. Have you conducted any studies 4 to disprove Mr. Malamud's theory? 5 MR. FEE: Same objection. 6 THE WITNESS: Not other than 7 what's reflected here in Exhibit 1. 8 BY MR. BRIDGES: 9 Q. What academic literature have 10 you relied upon to criticize Mr. Malamud's 11 theory in paragraph 144? 12 A. Nothing specific comes to mind. 13 Q. In paragraph 145, you state 14 that, "Mr. Malamud's suggestion that the sale 15 of downstream products and services 16 represents an untapped and undeveloped 17 opportunity for the Plaintiffs is incorrect." 18 Do you see that? 19 A. Yes, I do. 20 Q. And then you go on and make 21 some statements for the rest of the 22 paragraph, correct? 23 A. Yes. 24 Q. What studies did you engage in 25 to determine the facts that you stated in the</p> <p style="text-align: right;">Page 247</p>	<p>1 Q. Did you look at the financial 2 information of any entities other than the 3 plaintiffs? 4 A. I looked at Public Resource 5 financial information. 6 Q. Apart from Public Resource and 7 the plaintiffs, did you look at the financial 8 information of any other entities in making 9 the assertions that you made in 10 paragraph 145? 11 A. Not in undertaking my 12 assignment here. 13 Q. Did you consider the business 14 models of any entities other than the 15 plaintiffs and the defendant in making the 16 statements criticizing Mr. Malamud's theory 17 in paragraph 145? 18 A. Nothing in particular comes to 19 mind. I understand that there are 20 front-loaded business models, but -- at DIN, 21 for instance, but I don't recall undertaking 22 an investigation of the downstream activities 23 that they have. 24 Q. Did you undertake any 25 investigation of downstream activities of</p> <p style="text-align: right;">Page 249</p>

1 other US-based standards development
2 organizations that make their standards
3 freely available to the public?
4 A. Not that I recall.
5 Q. Would that have been relevant
6 to your analysis?
7 A. It wasn't necessary to do my
8 analysis, but I would be curious if I had
9 that information. If I -- if I had the
10 ability to examine that information, I would
11 be curious as to what that shows.
12 Q. In paragraph 146, you state,
13 "The loss of publications here will likely
14 reduce the Plaintiffs' sales of those
15 downstream products and services."
16 Do you see that?
17 MR. FEE: That's in 146?
18 THE WITNESS: Is that the last
19 sentence you were reading from?
20 BY MR. BRIDGES:
21 Q. Yes.
22 A. Yeah.
23 Q. Paragraph 146.
24 A. Yes, I do see that.
25 Q. Did you mean the loss of

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1 copyright in the publications here?
2 A. Certainly the loss of
3 publications, but I believe it would probably
4 be better to put the loss of copyright in the
5 publications as more reflective of the
6 assignment that I undertook here.
7 Q. What probability do you assign
8 to the likelihood that you refer to in that
9 sentence?
10 MR. FEE: Objection to form.
11 Lack of foundation.
12 THE WITNESS: I haven't
13 assigned a quantitative probability to
14 that.
15 BY MR. BRIDGES:
16 Q. Have you any estimate?
17 MR. FEE: Same objections.
18 THE WITNESS: I do not.
19 BY MR. BRIDGES:
20 Q. Have you any estimate as to the
21 magnitude of the likely reduction of
22 plaintiffs' sales of downstream products and
23 services?
24 MR. FEE: Same objections.
25 THE WITNESS: No, I have been

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1 unable to quantify that with great
2 accuracy.
3 BY MR. BRIDGES:
4 Q. Have you considered any
5 comparable circumstances apart from this case
6 that would provide guidance for your
7 prediction in the last sentence of
8 paragraph 146?
9 MR. FEE: Objection to form.
10 Vague.
11 THE WITNESS: I kept my mind
12 and eyes open to that, but I didn't
13 see information of a good comparator.
14 BY MR. BRIDGES:
15 Q. Did you research whether there
16 might be good comparators?
17 A. I --
18 MR. FEE: Same objection.
19 THE WITNESS: I did in the
20 sense of reading through the
21 literature and information to see if I
22 could learn of something that would be
23 a good comparator, but I didn't learn
24 of such comparator.
25 BY MR. BRIDGES:

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1 Q. You looked only at the
2 information shown in tab 2 to Exhibit 1?
3 A. Yes, I think that's right.
4 Q. What economic effect are you
5 aware of to the Blu-ray Disc Association from
6 its providing unrestricted access to its
7 standard publications for free?
8 A. I don't know. I thought you
9 had asked that earlier. If not, I apologize.
10 Nonetheless, I don't recall knowing the
11 answer to that question or undertaking that
12 evaluation.
13 Q. Did Blu-ray Disc Association go
14 out of business?
15 A. I don't think it's out of
16 business, no.
17 Q. Has it suffered material harm,
18 to your knowledge, because of unrestricted
19 access to its standard publications for free?
20 A. I don't know.
21 Q. Do you believe that, on the
22 theory of revealed preference, Blu-ray Disc
23 Association has determined that unrestricted
24 access to its standard publications for free
25 is in its interest?

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1 A. Yes. It's a different entity
2 than the SDOs here; but for its purposes, it
3 would appear that it's of the belief that
4 that's the optimal path to follow.
5 MR. BRIDGES: I think -- I
6 think we may pause things now and
7 reserve the remainder of our time.
8 Just a second. Oh, yes.
9 BY MR. BRIDGES:
10 Q. Do you believe that the
11 plaintiffs are harmed when the defendant
12 posts a standard that has been incorporated
13 by reference -- let me strike that.
14 Do you believe that plaintiffs
15 suffer harm from defendant posting a standard
16 that is not the latest version of the
17 standard?
18 MR. FEE: Objection. Form.
19 Compound.
20 THE WITNESS: Potentially, it
21 could cause confusion in the
22 marketplace as to what's the latest
23 standard, and there may be some
24 entities out there that are interested
25 in obtaining an earlier standard that

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1 would be obtaining it free rather than
2 through the legal routes established
3 by the plaintiffs.
4 BY MR. BRIDGES:
5 Q. Have you done any studies to
6 determine what confusion may be likely in the
7 marketplace in that regard?
8 MR. FEE: Objection to form.
9 THE WITNESS: I have not done a
10 likelihood of confusion study, no.
11 BY MR. BRIDGES:
12 Q. What research have you done as
13 to whether -- strike that.
14 What information do you have
15 about what market there is for earlier
16 versions of standards when there is a newer
17 version in the market?
18 MR. FEE: Objection to form.
19 THE WITNESS: I don't recall
20 undertaking specific research on that
21 topic.
22 BY MR. BRIDGES:
23 Q. What harm do you understand
24 plaintiffs would suffer if defendants post a
25 standard that is out of print?

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1 MR. FEE: Objection. Lack of
2 foundation. Vague.
3 THE WITNESS: I'm not -- I'm
4 not sure that I understand the concept
5 of a standard being out of print, so
6 maybe you could help me with that.
7 BY MR. BRIDGES:
8 Q. Do you know the term "out of
9 print"?
10 A. Generally, I do, yes.
11 Q. What do you understand it to
12 mean?
13 A. That it's no longer provided in
14 print form.
15 Q. All right. So what harm do you
16 understand plaintiffs would suffer if
17 defendants posted a standard that is out of
18 print?
19 MR. FEE: Objection to form.
20 THE WITNESS: Potentially, it
21 could be the harm similar to outdated
22 standards.
23 BY MR. BRIDGES:
24 Q. In other words, confusion in
25 the marketplace?

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1 A. Potential confusion in the
2 marketplace and potentially providing -- yes,
3 that -- that would be one form of it.
4 Q. What other harms do -- would
5 you identify from the defendants posting a
6 standard that is out of print?
7 A. Nothing else comes to mind this
8 moment, but there could be other things
9 that -- that I'm not thinking of right now.
10 Q. What harms do you understand
11 plaintiffs would suffer if a condition of a
12 standard being incorporated into law is that
13 plaintiffs could not forbid other entities
14 from making that law available widely and
15 freely to the public?
16 MR. FEE: Objection to form.
17 Incomplete hypothetical. Compound.
18 Calls for speculation.
19 THE WITNESS: I don't know.
20 I've not undertaken that assignment.
21 I've not given that particular
22 question any thought.
23 It seems economically to be
24 quite similar to the actions that have
25 occurred here, but I don't know. I've

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<p>1 not thought about that particular 2 topic. 3 MR. BRIDGES: Okay. I think 4 we'll pause here and reserve the rest 5 of the time for a later visit with 6 you, Mr. Jarosz. 7 Kevin, this is in reliance on 8 an exchange of correspondence between 9 Matt and you, I believe. If, for some 10 reason -- well, no. I think that's 11 all. 12 Anything else? 13 MR. FEE: Well, I don't have 14 any questions. 15 Do you guys have any questions? 16 MR. REHN: Not at this time. 17 MR. CUNNINGHAM: No. 18 MR. BRIDGES: Great. Thank 19 you. 20 THE WITNESS: Thank you. 21 THE VIDEOGRAPHER: All right. 22 Off the record at 4:31. This ends 23 media unit number 3 and ends testimony 24 for August 27th, 2015. 25 * * *</p> <p>Page 258</p>	<p>1 CERTIFICATE 2 3 I do hereby certify that I am a Notary 4 Public in good standing, that the aforesaid 5 testimony was taken before me, pursuant to 6 notice, at the time and place indicated; that 7 said deponent was by me duly sworn to tell 8 the truth, the whole truth, and nothing but 9 the truth; that the testimony of said 10 deponent was correctly recorded in machine 11 shorthand by me and thereafter transcribed 12 under my supervision with computer-aided 13 transcription; that the deposition is a true 14 and correct record of the testimony given by 15 the witness; and that I am neither of counsel 16 nor kin to any party in said action, nor 17 interested in the outcome thereof 18 19 WITNESS my hand and official seal this 20 11th day of September, 2015 21 22 23 24 25</p> <p><%signature%> Debbie Leonard, NDR, CRR Notary Public</p> <p>Page 260</p>
<p>1 (Witness excused.) 2 * * * 3 (Off the record at 4:31 p.m.) 4 * * * 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p>Page 259</p>	

EXHIBIT 3



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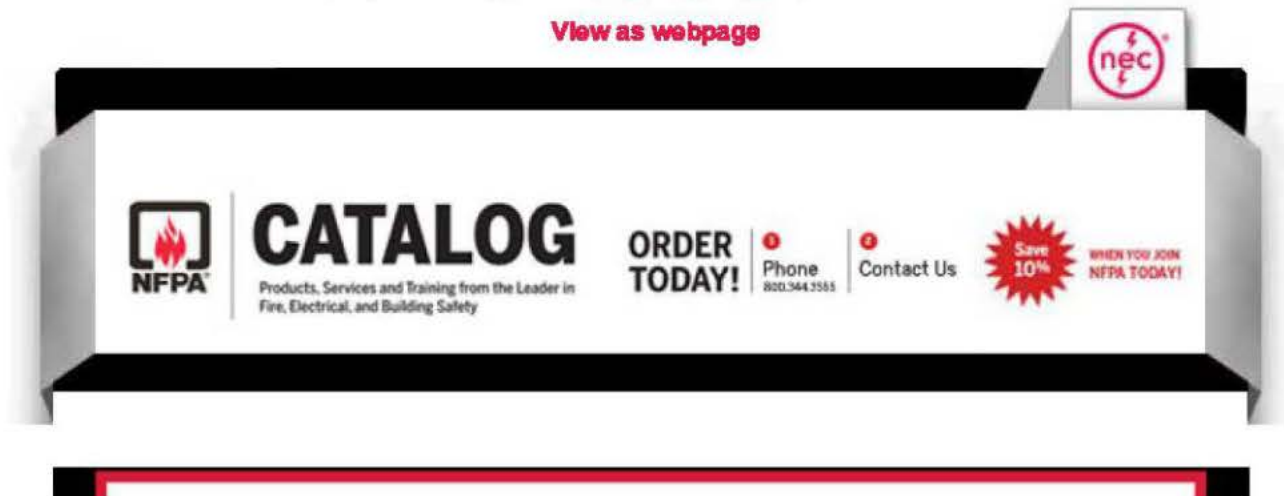
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**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

<p>AMERICAN SOCIETY FOR TESTING AND MATERIALS d/b/a/ ASTM INTERNATIONAL;</p> <p>NATIONAL FIRE PROTECTION ASSOCIATION, INC.; and</p> <p>AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS,</p> <p>Plaintiffs/ Counter-Defendants,</p> <p>v.</p> <p>PUBLIC.RESOURCE.ORG, INC.,</p> <p>Defendant/ Counter-Plaintiff.</p>	<p>Case No. 1:13-cv-01215-TSC</p>
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**PLAINTIFFS' OPPOSITION TO DEFENDANT'S MOTION FOR SUMMARY
JUDGMENT AND REPLY MEMORANDUM OF LAW IN SUPPORT OF THEIR
MOTION FOR SUMMARY JUDGMENT AND FOR A PERMANENT INJUNCTION**

language that will be used in an ASHRAE standard to ASHRAE. SUMF ¶¶ 143-44 (citing Reiniche Decl. ¶¶ 13-14, Exs. 1-2 (each ASHRAE form features a provision stating that the member “understand[s] that I acquire no rights in publication of such documents”; the provision is referred to in the document as a “copyright release”)).

For the four standards for which ASTM moved for summary judgment, ASTM presented evidence that the leader of the group that developed the standard and/or a member of the committee that drafted the standard assigned any and all copyrights in their individual contributions to ASTM. SUMF ¶¶ 20-24. With respect to the remaining ASTM standards at issue, ASTM has produced evidence that over 25,000 members completed membership renewal forms every year since 2007, which is as far back as ASTM maintains membership records, mostly using the online membership form. Suppl. SUMF ¶¶ 14-16. Although ASTM did not request copyright assignments from its members until approximately 2005, the language in the assignments it obtained since then retroactively assigned any copyrights that individual possessed in any ASTM standard to ASTM. *See* SUMF ¶ 18. Although Defendant searched high and low to identify isolated examples of individuals who may have renewed their memberships using other channels or whose membership forms did not include the assignment language, Defendant has not identified even one individual who contributed any language that appears in any ASTM standard at issue in this case who did not submit a membership form with the assignment language. And, as noted, even a single assignment suffices to give ASTM sufficient copyright interest to sue.

b. The Assignments Are Sufficient to Transfer Copyright Ownership to Plaintiffs.

Defendant’s nitpicking of the language of some of Plaintiffs’ assignments is for naught. A valid assignment need not “contain an elaborate explanation” or “‘magic words,’ but must

**UNITED STATES DISTRICT COURT
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AMERICAN SOCIETY FOR TESTING AND
MATERIALS d/b/a/ ASTM INTERNATIONAL;

NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and

AMERICAN SOCIETY OF HEATING,
REFRIGERATING, AND AIR-CONDITIONING
ENGINEERS, INC.

Plaintiffs,

v.

PUBLIC.RESOURCE.ORG, INC.,

Defendant.

Case No. 1:13-cv-01215-TSC-DAR

PUBLIC.RESOURCE.ORG, INC.,

Counterclaimant,

v.

AMERICAN SOCIETY FOR TESTING AND
MATERIALS d/b/a/ ASTM INTERNATIONAL;

NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and

AMERICAN SOCIETY OF HEATING,
REFRIGERATING, AND AIR-CONDITIONING
ENGINEERS, INC.

Counterdefendants.

DECLARATION OF STEVE COMSTOCK

I, Steve Comstock, declare as follows:

1. I am currently employed by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (“ASHRAE”) as its Director of Publications and Education. I have been employed by ASHRAE since 1974. Based on the information known to me as a result of the duties and responsibilities of my position, I have personal knowledge of the facts set forth herein and could and would testify competently thereto if called as a witness.

2. As part of my job responsibilities, questions regarding access to ASHRAE standards are ultimately directed to me, including questions regarding access to ASHRAE standards by individuals with disabilities.

3. ASHRAE is a non-profit organization that operates with the mission of advancing the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world. With that in mind, I have made every effort to make accommodations for anyone with a disability who wishes to access ASHRAE standards. These situations have not arisen often.

4. In my 31 years serving as the Director of Publications for ASHRAE, I recall only two specific examples where individuals requested that ASHRAE make alternate forms of access to ASHRAE publications available due to a disability, and in both instances ASHRAE made the appropriate accommodation. In 2013, ASHRAE sent a digital copy of an ASHRAE published textbook on HVAC systems to a visually impaired student from the Northern Alberta Institute of Technology so that the student could employ screen reader software to access the material audibly. Similarly, a hearing impaired individual alerted ASHRAE that he wished to attend a training class related to HVAC design, and ASHRAE provided sign-language interpretation.

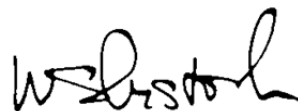
5. ASHRAE has also undertaken additional efforts to ensure that disabilities do not unnecessarily limit access to our standards or other services that ASHRAE provides. Last year, ASHRAE removed encryption from the digital copies of standards sold on the ASHRAE bookstore so that the standards would be more compatible with reading software used by visually impaired individuals. ASHRAE's partner in running the ASHRAE bookstore, a company called Techstreet, has made assurances to ASHRAE that it would also help accommodate individuals with disabilities. And, ASHRAE has formally adopted a policy allowing for alternate testing accommodations related to certification programs run by ASHRAE; a request form for test takers which to receive such accommodations can be found on the ASHRAE website at <https://www.ashrae.org/education--certification/certification/faqs#3>.

6. ASHRAE has consistently provided accommodation to individuals with disabilities in the past and intends to continue to do so in the future.

7. I am attaching to this declaration as Exhibit 1 a true and correct copy of ASHRAE Standard 90.1-2004, which I understand to be one of the ASHRAE standards at issue in this case. In my role as Director of Publications, I am familiar with ASHRAE's standards, including 90.1. I have reviewed this document and it is an accurate copy of Standard 90.1-2004.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed this 21st day of January, 2016 at Orlando, Florida.



Steve Comstock

EXHIBIT 1

Filed Under Seal

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR TESTING AND MATERIALS d/b/a/ ASTM INTERNATIONAL; NATIONAL FIRE PROTECTION ASSOCIATION, INC.; and AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS, Plaintiffs/ Counter-Defendants, v. PUBLIC.RESOURCE.ORG, INC., Defendant/ Counter-Plaintiff.	Case No. 1:13-cv-01215-TSC
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DECLARATION OF CHRISTIAN DUBAY
IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT

I, Christian Dubay, declare as follows:

1. I am Vice President, Codes and Standards, and Chief Engineer for the National Fire Protection Association ("NFPA"). My duties include managing and administering the NFPA Codes and Standards process. I have held this position since 2007. The following facts are based upon my own personal knowledge, and if called upon to do so, I could and would testify competently hereto.

2. A central component of NFPA's mission is to eliminate the risk of death, injury, property and economic loss due to fire, electrical and related hazards, for all people. As part of that mission, NFPA has long been involved with developing strategies and fire safety educational materials for people with disabilities.

3. Since at least 2007, NFPA has had a Disability Access Review and Advisory Committee. This committee is appointed by NFPA's president and advises NFPA's president and its Technical Committees.

4. The Disability Access Review and Advisory Committee works to identify existing needs and emerging issues within the disability community, and to ensure that the NFPA Codes and Standards process includes current subject matter that addresses disability issues, access provisions, and other matters that impact the disability community.

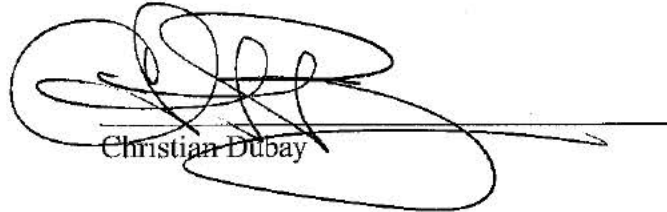
5. NFPA has taken a leading role in promoting building safety for the disabled by, among other things, developing an Emergency Evacuation Planning Guide for People with Disabilities, which is available for free download on NFPA's website. This Guide provides information on the five general categories of disabilities (mobility, visual, hearing, speech, and cognitive) and the four elements of evacuation information that occupants need: notification, way finding, use of the way, and assistance.

6. NFPA is also committed to providing access to its standards to all persons who have an interest in reading them. As part of that commitment, NFPA makes accommodations for disabled persons who request assistance in accessing any of NFPA's standards. NFPA is not aware of any persons who have requested assistance in accessing NFPA materials and have been unable to do so.

7. I am aware of one instance in which NFPA received a request for accommodation in accessing an NFPA standard from a person who had low vision. NFPA responded by providing that individual with a PDF copy of the requested standard, free of charge, and the individual was able to use that PDF copy to read the standard.

8. Attached hereto as Exhibit A is a true and correct copy of the 2011 edition of NFPA 70, the National Electrical Code.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct and that this declaration was executed this 21st day of January 2016 at Quincy, Massachusetts.



Christian Dubay

EXHIBIT A

FILED UNDER SEAL

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

<p>AMERICAN SOCIETY FOR TESTING AND MATERIALS d/b/a/ ASTM INTERNATIONAL;</p> <p>NATIONAL FIRE PROTECTION ASSOCIATION, INC.; and</p> <p>AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS,</p> <p>Plaintiffs/ Counter-Defendants,</p> <p>v.</p> <p>PUBLIC.RESOURCE.ORG, INC.,</p> <p>Defendant/ Counter-Plaintiff.</p>	<p>Case No. 1:13-cv-01215-TSC</p>
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SUPPLEMENTAL DECLARATION OF THOMAS B. O'BRIEN, JR.

Pursuant to 28 U.S.C. § 1746, I, Thomas B. O'Brien, Jr., declare the following statements to be true under the penalties of perjury:

1. I am over the age of 18 years and am fully competent to testify to the matters stated in this Declaration.
2. This declaration is based on my personal knowledge. If called to do so, I would and could testify to the matters stated herein.
3. I am Vice President and General Counsel at ASTM International ("ASTM"). I have worked at ASTM since 2003.
4. Prior to joining ASTM in 2003, I worked as outside counsel for ASTM between 1997 and 2003.

5. Attached as Exhibit 1 hereto is a true and correct copy of ASTM's online new membership form, which has been in place since 2005.

6. As shown in Exhibit 1, since 2005, new members to ASTM who completed their membership application online had to affirmatively click on a check box next to the following statement: "I agree, by my participation in ASTM and enjoyments of the benefits of my annual membership, to have transferred and assigned any and all interest I possess or may possess, including copyright, in the development or creation of ASTM standards or ASTM IP to ASTM."

7. Attached as Exhibit 2 hereto is a true and correct copy of ASTM's online membership renewal form, which has been in place since 2005.

8. Attached as Exhibit 3 hereto is a true and correct copy of instructions for registering a work item through ASTM's online system, which provides screen shots of each of the different screens a member will see when registering a work item.

9. ASTM has had a version of its "Form and Style for ASTM Standards" ("ASTM Form and Style Guide") since at least as early as 1957.

10. Attached as Exhibit 4 hereto is a true and correct copy of the version of the ASTM Form and Style Guide titled "Recommendations on Form of ASTM Standards," which was published in 1961 and references issuance in 1957.

11. Each version of the ASTM Form and Style Guide described certain components and provided the text for certain language that was required to be included in every ASTM standard during the relevant time period.

12. As part of the process of developing a draft standard, ASTM staff members added language and components that were required by the relevant ASTM Form and Style Guide to the draft prepared by the task group.

13. I have given training to ASTM employees and committee officers on use of the ASTM Form and Style Guide in connection with standards, in conjunction with Regulations Governing ASTM Technical Committees.

14. I have attended ASTM committee meetings in which the requirement to use certain language and information from the ASTM Form and Style Guide was discussed.

15. I supervise the ASTM employees who respond to requests to grant permissions to use ASTM's copyrighted materials, and I have personal knowledge of the circumstances and frequency with which these requests are granted and denied.

16. ASTM denies requests for permission to use its standards at no cost when the requester seeks to post the standard on a public website with no reasonable time limit and/or with no limitation on the number of people who can access it

17. I am not aware of any visually-impaired person who has informed ASTM that he/she was having difficulty accessing an ASTM standard due to a print disability. If a visually-impaired person requested access to an ASTM standard that was necessary due to a print disability, I would instruct the staff member who received the request to provide a copy of the ASTM standard in a format that accommodated the person's disability at no additional cost to the requester.

18. ASTM's practice was to obtain a copyright registration for every annual Book of Standards from 1980-2011. I am not aware of any circumstance in which ASTM deviated from this practice.

19. ASTM maintains records related to each ASTM standard that is proposed. Those records include information about the standard number, the committee that has jurisdiction over the standard, ballot items related to the standard, and the name of the technical contact for the

standard. These records are kept in the ordinary course of ASTM's regularly conducted activity at or near the time at which any activities related to the standard took place by a person with knowledge of the activities related to the standard. I am familiar with these computer-stored records because I use these records to prove legal advice to ASTM. I recognize the documents referenced in paragraphs 20-23 below to be printouts from these computer-stored records and the printouts accurately reflect the computer-stored records.

20. Attached as Exhibit 5 is a true and correct printout from the computer-stored records described in paragraph 19 above with information regarding ASTM D86-07.

21. Attached as Exhibit 6 is a true and correct printout from the computer-stored records described in paragraph 19 above with information regarding ASTM D975-07.

22. Attached as Exhibit 7 is a true and correct printout from the computer-stored records described in paragraph 19 above with information regarding ASTM D396-98.

23. Attached as Exhibit 8 is a true and correct printout from the computer-stored records described in paragraph 19 above with information regarding ASTM D1217-98.

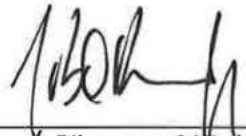
24. ASTM maintains records related to members who complete new membership and membership renewal forms each year. Those records include information such as the name of the member, the date on which the member completed the membership form, and for some of the members, whether the member completed the membership through ASTM's online system, a paper form, or another method. These records are kept in the ordinary course of ASTM's regularly conducted activity at or near the time at which the membership forms were completed by a person with knowledge of the completion of the membership forms. I am familiar with these computer-stored records because I use these records to prove legal advice to ASTM. I

recognize the documents referenced in paragraphs 25-26 below to be printouts from these computer-stored records and the printouts accurately reflect the computer-stored records.

25. Attached as Exhibit 9 is a true and correct printout from the computer-stored records described in paragraph 24 above showing ASTM individual membership forms that were completed in 2007.

26. Attached as Exhibit 10 is a true and correct printout from the computer-stored records described in paragraph 24 above showing ASTM organizational membership forms that were completed in 2007.

Dated: January 21, 2016



Thomas O'Brien

EXHIBIT 1

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR
TESTING AND MATERIALS,
d/b/a ASTM INTERNATIONAL;
NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and
AMERICAN SOCIETY OF
HEATING, REFRIGERATION AND
AIR CONDITIONING ENGINEERS,

Plaintiffs and
Counter-Defendants,

v.

Civil Action No.
1:13-cv-01215-TSC

PUBLIC.RESOURCE.ORG, INC.,

Defendant and
Counter-Plaintiff.

PAGES 1 - 264

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Videotaped Deposition of: JAMES FRUCHTERMAN

DATE: Friday, July 31, 2015

TIME: 9:34 a.m.

LOCATION: Morgan, Lewis & Brockius, LLP
Two Palo Alto Square, Suite 700
Palo Alto, California

REPORTED BY: Kelli Combs
Certified Shorthand Reporter
License 7705.

CONFIDENTIAL - PURSUANT TO PROTECTIVE ORDER

1 Q And what type of entities are authorized
2 entities?

3 A I don't have the precise code cite, but
4 authorized entities have to meet some
5 qualifications, nonprofit or government agency,
6 primary mission to serve people with disabilities.
7 It has to be one of their -- one of their primary
8 missions. There may be some other qualifications,
9 but those are the big ones I think of.

10 Q So if you meet those two qualifications,
11 what exception are you provided?

12 MR. KAPLAN: Objection; vague, incomplete
13 hypothetical, calls for a legal conclusion.

14 THE WITNESS: So some of the provisions of
15 Chafee, as I recall, are that you can make an
16 accessible copy of a literary work with some
17 exceptions for people with qualifying print
18 disabilities.

19 BY MS. RUBEL:

20 Q And you're permitted to make accessible
21 copies exclusively for people with disabilities; is
22 that right?

23 MR. KAPLAN: Objection; argumentative,
24 calls for a legal conclusion, incomplete
25 hypothetical, vague.

1 THE WITNESS: The word "exclusively"
2 probably appears in the statute, but I'm not
3 100 percent sure.

4 BY MS. RUBEL:

5 Q Well, is it your understanding that under
6 the Chafee Amendment if you meet certain
7 requirements, you're permitted to make copies of the
8 literary work and distribute them to anyone?

9 MR. KAPLAN: Objection; calls for a legal
10 conclusion, argumentative, incomplete hypothetical,
11 vague.

12 THE WITNESS: As an organization that is
13 availing itself of the Chafee Amendment, among other
14 things, we go to some length to make sure that
15 people with print disabilities are the only people
16 that are eligible for our service.

17 BY MS. RUBEL:

18 Q And do you go to those lengths because
19 it's your understanding that the Chafee Amendment
20 requires you to only make the materials accessible
21 to people with print disabilities?

22 MR. KAPLAN: Objection; calls for a legal
23 conclusion, vague.

24 THE WITNESS: As someone who operates
25 under the Chafee Amendment to support that, we need

1 to ensure that we only distribute them to people who
2 have qualifying disabilities. Yes.

3 BY MS. RUBEL:

4 Q Why is that?

5 A Because --

6 MR. KAPLAN: Objection; calls for a legal
7 conclusion, calls for speculation, vague.

8 THE WITNESS: I -- I believe that's the
9 language of the statute, that it's -- that it's
10 making the materials available for people with
11 disabilities.

12 BY MS. RUBEL:

13 Q And I think you mentioned that Benetech
14 operates as a nonprofit that you would consider an
15 authorized entity under the Chafee Amendment?

16 MR. KAPLAN: Objection; misstates
17 testimony, calls for a legal conclusion, vague.

18 THE WITNESS: Yes.

19 BY MS. RUBEL:

20 Q Are there any other requirements that
21 Benetech must meet in order to provide copies of
22 literary works to people with print disabilities
23 under the Chafee Amendment?

24 MR. KAPLAN: Objection; calls for a legal
25 conclusion, vague.

1 Those are the three major ways that people
2 provide proof of disability.

3 Q Would that be some kind of doctor?

4 MR. KAPLAN: Objection; vague.

5 THE WITNESS: It varies by disability what
6 professional credential someone needs to have to
7 provide a certification of disability.

8 BY MS. RUBEL:

9 Q So to access materials from Bookshare that
10 are made pursuant to the Chafee Amendment, an
11 individual would have had to show some proof of
12 disability by one of the methods that you just
13 described; is that correct?

14 MR. KAPLAN: Objection; misstates
15 testimony, vague.

16 THE WITNESS: If the Chafee Amendment is
17 one of the mechanisms we're using to deliver the
18 book, then there has to be an association with a
19 person with a qualifying disability under the Chafee
20 Amendment to obtain a copyrighted work. Yes.

21 BY MS. RUBEL:

22 Q And you have that configured into the
23 software so that the person clicks to open that
24 work, you will have ensured that you have proof of
25 disability on file?

1 MR. KAPLAN: Objection; argumentative,
2 vague, lacks foundation.

3 THE WITNESS: A user who's logged in who
4 chooses to download a copyrighted work where we're
5 using the Chafee Amendment as one of our
6 justifications for doing so, there is an electronic
7 indication in -- that that is something they're
8 permitted to do.

9 So someone who has not provided proof of
10 disability is not allowed to download a copyrighted
11 work under the Chafee Amendment, but they could
12 download a public domain or creative comments work.

13 BY MS. RUBEL:

14 Q If it was a copyrighted work and they
15 attempted to download it, they did not have proof of
16 disability on file, what would happen?

17 MR. KAPLAN: Objection; incomplete
18 hypothetical, lacks foundation.

19 THE WITNESS: My understanding is if they
20 have not provided proof of disability, the
21 "Download" button does not appear on the title page,
22 so they can find out that we have the work, but they
23 can't download it unless their account has that
24 enabled, and then there's a button that shows up
25 that says, How do you want to download it?

1 MR. KAPLAN: Objection; calls for
2 speculation, lacks foundation, vague.

3 THE WITNESS: My understanding was that
4 one of the uses of the scanned books was to make
5 books accessible to people with disabilities.

6 BY MS. RUBEL:

7 Q Do you know if that consortium had any
8 safeguards in place that ensured that only people
9 with print disabilities would be able to access the
10 copies of those books?

11 MR. KAPLAN: Objection; vague, lacks
12 foundation, calls for speculation.

13 THE WITNESS: I believe that only faculty,
14 students and staff of the research universities were
15 able to access information about the books so that
16 that access control was the primary access control.

17 I know less about the details of
18 disability-specific access, but I do believe that
19 there was some difference between regular,
20 nondisabled faculty, staff and students and disabled
21 faculty, staff and students.

22 BY MS. RUBEL:

23 Q Do you believe there was some sort of
24 certification required to show that the person had a
25 print disability to get access to certain of the --

1 of the books?

2 MR. KAPLAN: Objection; vague.

3 THE WITNESS: There are a lot of research
4 libraries that were involved in the case, and I
5 don't know what their process was beyond saying
6 these people have print disabilities so they'll get
7 more extensive access to the works than regular
8 faculty and staff and students.

9 BY MS. RUBEL:

10 Q Are you familiar with --

11 Aside from the consortium and the
12 HathiTrust and Benetech, are you familiar with other
13 organizations that provide access to copies of
14 copyrighted works under the Chafee Amendment?

15 MR. KAPLAN: Objection; vague.

16 THE WITNESS: There are some national
17 organizations that are well-known in the field: The
18 National Library Service for the Blind, Visually
19 Impaired and Physically Disabled of the Library of
20 Congress; NLS is the largest, Learning Ally,
21 formerly known as Recording for the Blind and
22 Dyslexic; the American Printing House for the Blind,
23 National Braille Press.

24 Those would probably be the four
25 organizations most often cited, along with -- sorry,

1 including Bookshare, which is the library that my
2 nonprofit, Benetech, operates.

3 But there are other organizations, many
4 other organizations, that I believe would assert
5 that they operate under the Chafee Amendment.

6 BY MS. RUBEL:

7 Q NLS, do they have some sort of requirement
8 that an individual provide proof of disability
9 before being able to access copyrighted materials
10 under the Chafee Amendment?

11 A Yes.

12 MR. KAPLAN: Objection; lacks foundation.

13 BY MS. RUBEL:

14 Q What are their requirements?

15 A They are stated on the NLS website, and
16 they're similar to those that we use, and we have a
17 agreement with NLS that if someone has submitted NLS
18 their qualifications, we accept that as proof of
19 disability for Bookshare services.

20 Q What about Learning Ally; do they have a
21 requirement that the person certify that they have a
22 print disability before being able to access the
23 materials?

24 MR. KAPLAN: Objection; vague, lacks
25 foundation.

1 THE WITNESS: Yes.

2 BY MS. RUBEL:

3 Q How about the American Printing House for
4 the Blind; do they have the same requirement?

5 MR. KAPLAN: Objection; vague, lacks
6 foundation.

7 THE WITNESS: Their requirement is
8 different because they're more narrowly focused on
9 blind and visually impaired students, and I'm not
10 sure that if they're providing a Braille copy of a
11 book, that they require people to prove that they're
12 disabled, because Braille is not -- hard copy
13 Braille is not easy to make copies of.

14 BY MS. RUBEL:

15 Q So they're not providing something, for
16 example, that could be read by a screen reader?

17 MR. KAPLAN: Objection; misstates the
18 testimony, argumentative, lacks foundation, vague.

19 THE WITNESS: They do. They have some
20 kind of registration system for students who have
21 the visual impairments that their organization
22 serves, and I believe that the visually impaired
23 students they serve would generally be understood as
24 qualifying under Chafee.

25

1 BY MS. RUBEL:

2 Q So they may not have a certification
3 requirement for people who are blind; is that your
4 understanding?

5 MR. KAPLAN: Objection; argumentative,
6 misstates testimony, vague.

7 THE WITNESS: I don't understand all of
8 their process, but I would say that their
9 identification of visually impaired students through
10 school systems and state education agencies is
11 comparable to our seeking a proof of disability from
12 the school systems, because the school systems are
13 legally obligated to serve blind and visually
14 impaired students.

15 But I did provide proviso that I could
16 imagine they might serve up Braille without a proof
17 of disability. It's not uncommon in our field that
18 hard copy Braille is circulated more broadly, and no
19 publisher has ever objected to that.

20 BY MS. RUBEL:

21 Q Okay. I understand.

22 And what about the National Braille Press;
23 are they providing things only in Braille?

24 MR. KAPLAN: Objection; lacks foundation,
25 vague.

1 THE WITNESS: It's my understanding they
2 primarily provide Braille books, but they may
3 provide other things. I think of them as The
4 Braille Press, so...

5 BY MS. RUBEL:

6 Q Do you know if they have a certification
7 requirement to show that you have a print
8 disability?

9 MR. KAPLAN: Objection; vague.

10 THE WITNESS: I don't -- sorry.

11 (Reporter clarification)

12 THE WITNESS: They might.

13 BY MS. RUBEL:

14 Q Prior to this case --

15 Prior to being retained as an expert in
16 this case, were you familiar with
17 Public.Resource.Org?

18 MR. KAPLAN: Objection; vague.

19 THE WITNESS: I had heard of them.

20 BY MS. RUBEL:

21 Q In what context had you heard of them?

22 A I had probably met Carl Malamud at some
23 point. I don't recall meeting him, but I was aware
24 of his organization and that he had done different
25 things around making things accessible, and this is

1 A I think we focused on the website that
2 didn't have an accessible sign-up process, and I'm
3 happy to find out which one of the three standards
4 bodies had that problem, just so I correctly testify
5 to that.

6 Q Sure.

7 A So I'm looking at my expert report. So we
8 focused our efforts on NFPA when we did our
9 in-person evaluation.

10 Q Is Rob Turner blind?

11 A Yes.

12 Q What is his background?

13 MR. KAPLAN: Objection; vague.

14 THE WITNESS: He's a blind engineer for my
15 nonprofit organization.

16 BY MS. RUBEL:

17 Q What -- what is his role --

18 Is he employed by Benetech?

19 A Yes, he's employed by Benetech as a -- as
20 a Quality Assurance Engineer.

21 Q So what does he do in that role?

22 A He tests the quality of our products,
23 including our websites, evaluates accessibility, but
24 his focus is on our products.

25 Q Why did you seek Rob Turner's assistance?

1 A He's one of our blind employees who
2 happens to be in the office regularly as opposed to
3 being located in other locations; so I could go down
4 and talk to him.

5 Q So you asked --

6 You asked Rob to try to access standards
7 from NFPA's website and see if he was able to do so?

8 MR. KAPLAN: Objection; vague.

9 Go ahead.

10 THE WITNESS: Correct. First, I asked him
11 to look at the sign-up process to see if he could
12 sign up for a free reading account without needing
13 assistance from a sighted person, and he wasn't able
14 to do that.

15 BY MS. RUBEL:

16 Q Was there anything else you asked him to
17 do?

18 A After I pushed the "I Agree" button and
19 got him through that, that roadblock, I also asked
20 him to try to read the standard in question.

21 Q Did you ask Rob to try to access any of
22 the Plaintiffs' standards that are posted on Public
23 Resource's website?

24 A No, I did not.

25 Q What are the Web content accessibility

1 MR. KAPLAN: It's okay. Got to give me a
2 breath here.

3 THE WITNESS: Okay. I will. I'll try.

4 BY MS. RUBEL:

5 Q As part of your analysis, did you analyze
6 whether the tables in the HTML were accessible --
7 the tables in HTML from Public Resource's website
8 were accessible to blind people?

9 A I don't recall evaluating tables in
10 detail.

11 Q Did you evaluate whether the graphics in
12 the standards -- in Plaintiffs' standards were
13 accessible to blind people from Public Resource's
14 website?

15 A No.

16 THE VIDEOGRAPHER: Is this a good place?

17 MS. RUBEL: Sure. We can take a break.
18 We ran out of tape.

19 THE VIDEOGRAPHER: This is end of Disk 2.
20 We're off the record at 3:37.

21 (Recess taken.)

22 THE VIDEOGRAPHER: This is beginning of
23 Disk 3. We're back on the record at 3:48.

24 BY MS. RUBEL:

25 Q Based on your analysis of the Plaintiffs'

1 standards that are available on Public Resource's
2 website in HTML format, do you have enough
3 information to determine whether an engineer who
4 wanted access to that standard would be able to
5 obtain all the necessary information from the
6 standard?

7 MR. KAPLAN: Objection; incomplete
8 hypothetical.

9 THE WITNESS: No.
10 BY MS. RUBEL:

11 Q Do you know how many of the standards on
12 Public Resource's website -- how many of Plaintiff's
13 standards that are available on Public Resource's
14 website are only available in PDF format?

15 A No.

16 Q Do you know how many of the standards that
17 are at issue in this case are only available on
18 Public Resource's website in PDF format?

19 A No.

20 Q Do you know if the number that is
21 available in PDF format is greater than the number
22 available in HTML format?

23 MR. KAPLAN: Objection; vague.

24 THE WITNESS: It would be likely from my
25 inspection of the directories that there would be

1 A (Reading):

2 "Having reviewed the
3 accessibility of the same standards
4 content rendered by
5 Public.Resource.Org and those of
6 the free access options provided by
7 the NFPA, ASHRAE and ASTM, it is my
8 opinion that Public.Resource.Org
9 currently provides the only
10 accessible option for
11 people/citizens with print
12 disabilities to access these
13 standards."

14 Q And in forming that opinion, you compared
15 the standards that were available on
16 Public.Resource.Org's website with the free access
17 options provided by Plaintiffs in forming that
18 opinion; is that correct?

19 A Correct.

20 Q Did you evaluate any PDFs being sold by
21 NFPA in forming that opinion?

22 A No.

23 Q Did you evaluate any PDFs being sold by
24 ASHRAE in forming that opinion?

25 A No.

1 Q Did you evaluate any PDFs sold by ASTM in
2 forming that opinion?

3 A No.

4 Q So when you say that Public.Resource.Org
5 currently provides the only accessible option for
6 people/citizens with print disabilities to access
7 these standards, you're excluding from that opinion
8 any PDFs that are being offered by the Plaintiffs?

9 MR. KAPLAN: Objection; misstates the
10 document and testimony, misleading and vague.

11 THE WITNESS: In that sentence I refer to
12 "free access options."

13 BY MR. REHN:

14 Q So when you said the only accessible
15 options, what you actually meant to say was the only
16 freely accessible options without charge?

17 MR. KAPLAN: Objection. Thane, you're
18 getting a little badgering here, but you can answer
19 the question.

20 THE WITNESS: Yes.

21 BY MR. REHN:

22 Q Is it possible that documents being sold
23 can be described as accessible to people with print
24 disabilities?

25 MR. KAPLAN: Objection; vague.

1 THE WITNESS: Yes.

2 BY MR. REHN:

3 Q Have you ever described a PDF for sale as
4 being accessible to someone with print disabilities?

5 A Let's see. I'm not sure I've described --
6 I'm sure I've described paid products in other
7 formats as accessible, and I'm sure that I've
8 described PDFs as accessible. I'm not sure I've
9 described a paid PDF product as accessible.

10 Q But it's fair to say that if the PDFs
11 being sold by Plaintiffs are accessible to people
12 with print disabilities, this sentence would be
13 potentially inaccurate?

14 MR. KAPLAN: Objection; misleading, vague,
15 argumentative.

16 THE WITNESS: I think it's accurate as I
17 wrote it, but I'm happy, as we have, to clarify what
18 I meant by that sentence.

19 BY MR. REHN:

20 Q Sure.

21 And to clarify what you meant was you were
22 comparing just the free access options provided by
23 the Plaintiffs on their websites with the content
24 rendered by Public.Resource.Org?

25 A Those were the content that I evaluated,

1 yes.

2 Q Are you aware that NFPA sells eBook
3 versions of some of its standards?

4 A I'm -- I'm not sure I'm aware of that.

5 Q And did you evaluate any eBook versions of
6 standards sold by NFPA or the other two Plaintiffs
7 in this case?

8 A No. I was not asked to.

9 Q So do you have an opinion on whether the
10 eBook versions sold by NFPA and the other two
11 Plaintiffs are accessible to persons with print
12 disabilities?

13 A I can't express an opinion without looking
14 at them.

15 Q Do you have opinion on whether the PDFs
16 being sold by NFPA and the other two Plaintiffs in
17 this case are accessible to persons with print
18 disabilities?

19 A No. But in my experience, most PDFs are
20 not accessible or are not -- let me correct that.
21 Not as accessible as, say, HTML versions of those
22 would be since accessibility is on a spectrum.

23 Q But you don't have an opinion as to these
24 specific PDFs that are sold by NFPA?

25 A I haven't examined them.

1 MR. KAPLAN: Do you want to take a break?

2 THE WITNESS: No, I'll keep going. I'll
3 get water next time.

4 MR. REHN: You can take a break whenever
5 you want.

6 THE WITNESS: No problem.

7 BY MR. REHN:

8 Q So you mentioned earlier that you were
9 aware of an NFPA standard that was available on
10 Bookshare?

11 A Uh-huh.

12 Q If I could just show you a document.

13 MR. REHN: What number are we up to?

14 THE REPORTER: We're at 4002.

15 (Plaintiffs' Exhibit 4002 marked
16 for identification.)

17 BY MR. REHN:

18 Q Do you recognize this as a printout of the
19 Bookshare Web page?

20 A Yes.

21 Q And you'll see here that this says "NFPA
22 70-2014 Electrical Code Book"?

23 A Yes.

24 Q And I believe you said earlier that your
25 understanding was that a partner of Bookshare had

1 submitted this to Bookshare?

2 A Correct.

3 Q Is that on the second page of this
4 exhibit, you see it says "Submitted by Daproim
5 Africa"?

6 A Yes.

7 Q Is that who you understand submitted this
8 document?

9 A Yes.

10 Q How does Bookshare enable certain persons
11 to share documents with Bookshare?

12 A So we're talking about essentially the
13 content intake mechanisms at Benetech, and you'd
14 like me to enumerate those different mechanisms?

15 Q Well, let's start with this Daproim
16 Africa. They're an adult educator; is that what you
17 said earlier?

18 A No.

19 Q What's your understanding --
20 Do you know who this submitter is?

21 A Yes.

22 Q And who are they?

23 A They're a subcontractor to Benetech for
24 books -- they do the proofreading services on books
25 we've been asked for by a student.

1 Q So a student would have submitted a
2 request and because it was educational, you would
3 have approved that request; is that what you
4 testified to earlier?

5 MR. KAPLAN: Objection; misstates
6 testimony, calls for speculation.

7 THE WITNESS: Yes.

8 BY MR. REHN:

9 Q And after you approved that request, you
10 would have had a subcontractor proofread the
11 document and then upload it to Bookshare?

12 MR. KAPLAN: Objection; vague, calls for
13 speculation.

14 THE WITNESS: Yes.

15 BY MR. REHN:

16 Q Do you allow anybody to submit documents,
17 other than subcontractors?

18 A Yes.

19 Q Do you engage in any quality control on
20 documents that persons, other than subcontractors,
21 submit?

22 A Yes.

23 Q And what is that quality control process?

24 A We run an automated quality evaluator that
25 scores the document on, for example, looking for OCR

1 errors, looking for swear words, looking for length;
2 it's supposed to be 100-page document and it's a
3 1-page document that's submitted or a thousand-page
4 document.

5 And we also have a human being take a
6 brief look at the document, kind of just do a check
7 also to make sure that it makes -- that it makes
8 sense.

9 Q Are those documents that are submitted
10 generally PDFs or Word documents or HTML? What
11 format do they usually come in?

12 MR. KAPLAN: Objection; lacks foundation,
13 calls for speculation, vague.

14 THE WITNESS: Bookshare has a detailed
15 description of how we want documents submitted to
16 us. In general, we prefer documents that are --
17 when they're coming from volunteers that are
18 scanning that are more Microsoft Word or RTF, which
19 is a related format. For those books that are
20 scanned, that's our preferred format, and we
21 wouldn't accept a PDF.

22 BY MR. REHN:

23 Q So you accept documents or books that are
24 scanned by volunteers?

25 MR. KAPLAN: Objection; misstates

1 testimony.

2 THE WITNESS: We accept books from quite a
3 number of sources of which volunteers is one source.

4 BY MR. REHN:

5 Q Can anybody sign up to be a volunteer to
6 submit books or documents?

7 A I think right now you have to be a U.S.
8 resident or organization.

9 Q So any U.S. resident could sign up to
10 submit books or documents to Bookshare?

11 A Yes, and they must agree to our volunteer
12 agreement that specifies the limitations on what
13 they can do and what they can't do.

14 Q So if a concerned citizen wanted to get
15 books or documents accessible to the visually
16 impaired, they could volunteer to scan those
17 documents, proofread them, ensure that they're free
18 of errors and then submit them to Bookshare, and if
19 they passed your quality control process, you would
20 make them available on your website?

21 MR. KAPLAN: Objection; incomplete
22 hypothetical, vague.

23 THE WITNESS: Yes.

24 BY MR. REHN:

25 Q Do you try to encourage volunteers to

1 and implementing the standard?

2 A No.

3 Q Did you see any graphical material in that
4 standard?

5 A I recall seeing graphical material in the
6 standards I evaluated.

7 Q Did you assess whether that graphical
8 material was accessible via a screen reader in the
9 HTML version of the Public Resource website?

10 MR. KAPLAN: Objection; vague.

11 THE WITNESS: I didn't check for
12 additional accessible metadata on the images.

13 BY MR. REHN:

14 Q So do you have an opinion on --

15 Do you have enough information to know
16 whether a visually impaired fire safety professional
17 could use the HTML version of NFPA 101 that is
18 available on Public Resource's website and safely
19 rely on that for professional purposes?

20 MR. KAPLAN: Objection; vague.

21 THE WITNESS: I am not a fire professional
22 expert, so I can't evaluate how this applies
23 specifically to that profession.

24 BY MR. REHN:

25 Q So the answer to my question is "no"?

1 FURTHER EXAMINATION

2 BY MR. REHN:

3 Q Good evening, Mr. Fruchterman.

4 A Hello.

5 Q And do you understand that you're still
6 under oath?

7 A Yes.

8 Q Has anything happened between now and the
9 last time we spoke that would affect your ability to
10 answer my questions fully and truthfully?

11 A No.

12 Q So I'd like to direct your attention to an
13 exhibit that we are marking as Exhibit Number 4006.

14 A Yes.

15 (Plaintiffs' Exhibit 4006 to be
16 marked for identification.)

17 BY MR. REHN:

18 Q Do you recognize this as an e-mail to
19 yourself from Rob Turner that was sent on April 10th
20 of this year at 10:56 a.m.?

21 A Yes.

22 Q And the subject line is "OCR Document"?

23 A Yes.

24 Q Do you recall receiving this e-mail?

25 A Yes.

1 Q And do you know what OCR document

2 Mr. Turner is referring to in the subject line?

3 A Is there, like, an immediately prior
4 document that actually mentions this? Sorry.

5 Sorry. I mean, can I look through the list of
6 produced documents?

7 MR. KAPLAN: You just got to answer his
8 question.

9 BY MR. REHN:

10 Q Based on this e-mail, do you know which
11 document he's referring to?

12 A I don't remember which one of the
13 image-based standards I shared with him, no. But it
14 was one of the image-based PDFs that I asked him to
15 look at.

16 Q So the image-based PDFs that you sent
17 Mr. Turner were -- those were PDFs you had taken
18 from Public Resource's website; is that correct?

19 MR. KAPLAN: Objection; argumentative,
20 misleading and vague.

21 THE WITNESS: It probably was an
22 image-based PDF from the Public.Resource.Org
23 website, and that's my -- that's my recollection.
24 Yes.

25

1 BY MR. REHN:

2 Q Did you make any image-based PDFs of
3 documents from any of Plaintiffs' websites?

4 A I didn't make any documents from
5 Plaintiffs' websites. I downloaded whatever
6 document -- no, I downloaded -- I viewed the
7 document, yes. So, no.

8 Q After you sent him a document, it would
9 have been one from Public Resource's website?

10 A That's correct. Thank you.

11 Q And if I could direct you to the last
12 sentence of the first paragraph of his e-mail, would
13 you read that sentence, please?

14 A The one "I don't think..."?

15 Q Yes.

16 A Yes.

17 "I don't think this type of
18 document can be considered to be
19 accessible."

20 Q So based on your prior testimony, is it
21 your understanding that he is saying that the
22 image-based PDF from Public Resource's website that
23 you sent to Mr. Turner, in his opinion, cannot be
24 considered to be accessible?

25 MR. KAPLAN: Objection; misleading,

1 argumentative, vague.

2 THE WITNESS: I think Rob Turner doesn't
3 believe it meets our accessibility standards, which
4 is what his job is to primarily work on our library
5 for the blind. We would not post an image-based PDF
6 and call it accessible.

7 BY MR. REHN:

8 Q And do you agree with Mr. Turner's
9 assessment that this type of document cannot be
10 considered to be accessible?

11 A I think it's less accessible than many of
12 the other documents and more than others, as I wrote
13 in my expert report. I can probably quote from the
14 report.

15 Q There's no question pending. So...

16 A Okay. I would direct you to my last
17 sentence of my report --

18 MR. KAPLAN: Jim, there's no question
19 pending.

20 THE WITNESS: All right.

21 MR. REHN: I have no further questions.
22 And I believe that concludes Plaintiffs' questioning
23 of this witness.

24 MR. KAPLAN: I have no questions at this
25 time.

EXHIBIT 4

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR TESTING AND) Case No.
MATERIALS d/b/a ASTM INTERNATIONAL;) 1:13-cv-01215-EGS
)
NATIONAL FIRE PROTECTION)
ASSOCIATION, INC.; and)
)
AMERICAN SOCIETY OF HEATING,)
REFRIGERATING, AND)
AIR-CONDITIONING ENGINEERS, INC.,)
)
Plaintiffs,)
vs.)
)
PUBLIC.RESOURCE.ORG, INC.,)
)
Defendant.)
-----)
AND RELATED COUNTERCLAIMS.)
-----)

RULE 30(B)(6) VIDEOTAPED DEPOSITION OF AMERICAN
STANDARDS SOCIETY FOR TESTING AND MATERIALS, BY AND
THROUGH ITS DESIGNEE,
JEFFREY GROVE
WASHINGTON, D.C.
WEDNESDAY, MARCH 4, 2015

Reported by:
NANCY J. MARTIN, CSR No. 9504, RMR
Job No. 2010158
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1 their codes, and I wouldn't be able to tell you what 12:31:09
2 codes, but I believe it goes all the way back to 2004, 12:31:11
3 2005. 12:31:18

4 Q. In the answer you just gave, you referred to 12:31:19
5 when you started working with NFPA and exchanged 12:31:23
6 information with them. When do you date that? 12:31:23

7 A. That would be, I think I've met -- the 12:31:25
8 standards community in Washington is a small 12:31:31
9 community. So I've met the various Washington 12:31:34
10 representatives for agencies. Excuse me. For SDO's, 12:31:35
11 standards development organizations, many times in my 12:31:39
12 career. And I would say I've worked cooperatively and 12:31:41
13 individually whenever necessary throughout my career 12:31:45
14 at ASTM. So... 12:31:48

15 Q. Well, I think that doesn't quite answer my 12:31:56
16 question. I think you said you developed this 12:31:59
17 interest when you began to hear -- sorry. When you 12:32:02
18 began to -- when you started working with them on 12:32:06
19 exchanging information. I'm just trying to find out 12:32:10
20 what year you're referring to when you said that. 12:32:12

21 MR. FEE: Objection. Mischaracterizes his 12:32:14
22 testimony. 12:32:15

23 THE WITNESS: I wouldn't be able to give you 12:32:19
24 an exact year except for I know when we began the APCO 12:32:20
25 related work, that was 2011 time frame. 12:32:25

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1 BY MR. BRIDGES: 12:32:29

2 Q. And did your interest in providing a reading 12:32:31

3 room arise about the same time as the APCO engagement 12:32:32

4 arose? 12:32:38

5 A. Similar time line. I believe it began to -- 12:32:40

6 I began to introduce the idea and socialize it before 12:32:43

7 then. Maybe a year or so before then. 12:32:45

8 Q. You introduced the idea of a reading room? 12:32:48

9 A. The idea of figuring out a way to strike the 12:32:51

10 right balance. I think another idea we had at the 12:32:53

11 time that I introduced was perhaps figuring out if 12:32:57

12 there was a way we could provide better summaries of 12:33:01

13 our standards to the public rather than relying on 12:33:04

14 abstracts. So there was various ideas that I began to 12:33:07

15 socialize with ASTM staff about how to strike this 12:33:13

16 delicate balance between providing the public with 12:33:17

17 greater access to our documents while still preserving 12:33:20

18 what we need to preserve in order to meet -- continue 12:33:25

19 the enterprise of developing standards, keeping the 12:33:28

20 barriers to participation low, and ensuring that would 12:33:31

21 continue to provide the important value that we do in 12:33:35

22 high-quality market-relevant standards that protect 12:33:39

23 the public. 12:33:42

24 Q. How did you introduce the idea of providing a 12:33:44

25 reading room in the discussion you were referring to? 12:33:46

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1 specifically. Using the NIST database as a guideline, 12:49:53
2 we've incorporated, you know, as much of that as 12:50:02
3 possible in the reading room. At times I believe we 12:50:04
4 also tried to add a little bit more intelligence to it 12:50:06
5 to determine if an agency was undertaking a subsequent 12:50:09
6 rule-making, and we became aware that the agency had 12:50:18
7 published a new final rule which either changed the 12:50:24
8 reference to an ASTM standard that we had placed in 12:50:27
9 the reading room or added a new ASTM standard to the 12:50:31
10 reading room. 12:50:38

11 Then we took steps to add that to the reading 12:50:39
12 room. It's not an exact science. We don't pay a 12:50:42
13 vendor to perform the service for us. We rely either 12:50:48
14 exclusively on the NIST database or we -- it's based 12:50:55
15 on intelligence that we've gathered about new 12:50:58
16 rulemakings. 12:51:01

17 Q. How do you gather intelligence about 12:51:03
18 incorporations of ASTM standards by reference? 12:51:08

19 A. Well, as much as possible we read the federal 12:51:14
20 register. I'd like to think we read it on a regular 12:51:17
21 basis, but sometimes it's more infrequent than that. 12:51:20
22 So we will search key terms in the federal register to 12:51:24
23 see if it's mentioning ASTM and if there's a rule that 12:51:30
24 has resulted in the publication of standards. And 12:51:34
25 sometimes we're ahead of it because ASTM has a policy 12:51:38

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1 of working with agencies during the notice of proposed 12:51:41
2 rule-making process. 12:51:45
3 Any agency that comes to us and asks us to 12:51:46
4 put a standard up for public review during the public 12:51:50
5 review period of a rule, we work with them to make 12:51:53
6 that possible. So at times we know that a certain 12:51:57
7 number of ASTM standards have been in a notice to 12:52:01
8 proposed rulemaking and that the new rule's expected 12:52:04
9 to come out, so we can look for it. 12:52:08
10 Q. Does ASTM provide assistance to the 12:52:16
11 government in any way when the government is 12:52:18
12 considering whether to incorporate an ASTM standard by 12:52:20
13 reference? 12:52:23
14 MR. FEE: Objection. Vague. 12:52:24
15 THE WITNESS: So we do -- I'm familiar with a 12:52:29
16 couple things that either I do or a member of my staff 12:52:31
17 does. We look to see -- when we're aware that an ASTM 12:52:34
18 standard is going to be used and incorporated by 12:52:39
19 reference in some type of an action, we look to see 12:52:43
20 what version of the standard and what designation of 12:52:46
21 the standard is being used, and I believe on occasion 12:52:50
22 if they're using -- proposing to use an outdated 12:52:54
23 version of a standard, or, quite frankly, we've seen 12:52:59
24 errors where they've attempted to use an ASTM biofuel 12:53:02
25 standard, and rather than referencing D6751 they've 12:53:06

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1 A. I believe close to the full collection. So 15:31:36
2 as many as 1,300 ASTM documents. 15:31:38
3 Q. What announcements to the press did ASTM make 15:31:43
4 about its reading room going live? 15:31:48
5 A. I don't recall if we made a lot of 15:31:54
6 announcements when it went live in January. I believe 15:31:55
7 we were concerned about if it would function and work, 15:31:58
8 and I think we wanted to get a little experience with 15:32:05
9 it before we broadcast it too widely. 15:32:08
10 Q. Did ASTM ever make announcements to the press 15:32:12
11 about the availability of its reading room? 15:32:15
12 MR. FEE: Objection. Vague. 15:32:17
13 THE WITNESS: Yes. Through our flagship 15:32:19
14 communication, Standardization News, which we 15:32:21
15 delivered to all of our members and stakeholders. I 15:32:25
16 believe 30,000 individuals receive it six times a 15:32:27
17 year. Mention of it was made in the magazine. 15:32:33
18 BY MR. BRIDGES: 15:32:36
19 Q. When was that? 15:32:36
20 A. I'm sorry. I don't know specifically. 15:32:37
21 Q. How long after the launch of the reading room 15:32:39
22 did that occur? 15:32:45
23 A. I'm sorry. I don't recall. It was in 2013. 15:32:53
24 Q. Did ASTM ever make an announcement to the 15:32:59
25 press about the availability of its reading room 15:33:03

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1 beyond the announcement in Standardization News? 15:33:08

2 MR. FEE: Objection to form. 15:33:13

3 THE WITNESS: I believe it was also announced 15:33:15

4 at the ASTM annual business meeting in 2013. 15:33:16

5 BY MR. BRIDGES: 15:33:22

6 Q. The "ASTM business meeting" being a meeting 15:33:22

7 of ASTM members and stakeholders? 15:33:25

8 A. Yes. 15:33:28

9 Q. What other public announcements did ASTM make 15:33:32

10 about the availability of its reading room beyond 15:33:36

11 announcements to its own members and stakeholders? 15:33:40

12 A. I also believe that there was a reference to 15:33:44

13 it in the ASTM annual report in 2013, which was 15:33:46

14 published in 2014. 15:33:50

15 Q. What else? 15:33:52

16 A. I make it part of my message, when I'm 15:33:58

17 visiting with stakeholders that I interact with, that 15:34:01

18 ASTM has this reading room. 15:34:05

19 Q. What else? 15:34:07

20 A. Jim Thomas, our president, mentions it in his 15:34:08

21 interactions on a worldwide basis. 15:34:12

22 Q. With whom? 15:34:16

23 A. Jim Thomas is a popular figure in the 15:34:19

24 standards community, a well-known expert, and he 15:34:22

25 speaks to many groups. So I wouldn't be able to give 15:34:25

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1	you specifics without reviewing his calendar.	15:34:30
2	Q. What else?	15:34:34
3	A. ASTM has an electronic newsletter. I believe	15:34:40
4	we mentioned it in the newsletter in 2013.	15:34:45
5	Q. To ASTM's members and stakeholders?	15:34:49
6	A. Yes. To anyone interested in subscribing.	15:34:52
7	Q. What else?	15:34:54
8	A. We previously discussed some efforts to	15:35:02
9	educate policy makers and stakeholders in Washington	15:35:07
10	through an APCO public relations campaign. I believe	15:35:10
11	the reading room was part of that messaging as well in	15:35:14
12	2013.	15:35:17
13	Q. What else?	15:35:19
14	A. That's all I can recall at this time. It had	15:35:28
15	a place on our website as well.	15:35:34
16	Q. Of all the persons who had access to --	15:35:40
17	sorry. Were you about to mention another?	15:35:43
18	A. I'm sorry. We also sent a few letters to	15:35:46
19	agencies informing them of the creation of the reading	15:35:49
20	room.	15:35:54
21	Q. By "agencies," do you mean government	15:35:57
22	agencies?	15:35:58
23	A. To government agencies, to the office of	15:35:58
24	management and budget, and to the office of the	15:36:01
25	federal register at NARA, the National Archives	15:36:04

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EXHIBIT 7

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF COLUMBIA

3
4 AMERICAN SOCIETY FOR TESTING
5 AND MATERIALS d/b/a ASTM
6 INTERNATIONAL; NATIONAL FIRE
7 PROTECTION ASSOCIATION, INC.,;
8 and AMERICAN SOCIETY OF HEATING,
9 REFRIGERATING, AND AIR-CONDITIONING
10 ENGINEERS, INC.

11 Plaintiffs, CIVIL ACTION FILE
12 vs. NO. 1:13-CV-01215-EGS
13 PUBLIC.RESOURCE.ORG, INC.,
14 Defendant.

15
16 30(b)(6) VIDEOTAPED DEPOSITION OF
17 STEVEN COMSTOCK
18 March 5, 2015
19 10:20 a.m.
20 1075 Peachtree Street
21 Suite 3625
22 Atlanta, Georgia 30309
23 Lee Ann Barnes, CCR-1852, RPR, CRR

24
25 PAGES 1 - 199

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INDEX OF EXAMINATION

WITNESS: STEVEN COMSTOCK

EXAMINATION PAGE

By Mr. Bridges 8

1 A. Yeah, about 12 years ago I had one taken.

2 Q. Is that the only deposition?

3 A. That's the only one.

4 Q. What kind of case did that involve?

5 A. That was a personnel matter for our
6 organization.

7 Q. Did you testify at trial?

8 A. No, I did not.

9 Q. Did you have a chance to meet with
10 Mr. Lewis or other counsel before this deposition to
11 prepare for the deposition?

12 A. Yes, I did.

13 Q. I'll ask you to look at Exhibit 1076 --
14 (Defendant's Exhibit 1076 was marked for
15 identification.)

16 Q. (By Mr. Bridges) -- which is Defendant's
17 Notice of 30(b)(6) deposition of ASHRAE. Please take
18 a look at it, Mr. Comstock.

19 Do you understand that you are here today
20 testifying as a representative of ASHRAE on Topics 4,
21 5, 7, 8, 9, 10, 12, 13, 14, 18, 23, 24, 30, and 31?

22 A. Yes, that's my understanding.

23 Q. When did ASHRAE start providing a reading
24 room for public access to ASHRAE's standards?

25 A. We made selected standards available for

1 read-only access, and I believe that was about 15
2 years ago. I don't have the exact date. It was in
3 that -- that range of time.

4 Q. How did ASHRAE select what standards to
5 make available?

6 A. These are our -- our most popular
7 standards, the ones for which there was the greatest
8 demand.

9 Q. How many standards -- strike that.
10 How many current standards does ASHRAE
11 publish?

12 A. I don't have the exact number. My
13 recollection would be in the neighborhood of -- of
14 75.

15 Q. How many of those standards are on ASHRAE's
16 reading room available to the public now?

17 A. At the current time, I believe there are 10
18 of those standards available.

19 Q. Does ASHRAE also make available through its
20 reading room earlier versions of those 10 standards?

21 A. We provide -- we provide the current
22 versions of those standards.

23 Q. But not the earlier versions?

24 A. I believe that's the case.

25 Q. Do you know why ASHRAE began providing

1 public access to some of its standards?

2 A. We were actually hoping to increase our
3 sales of those standards. It would be to the -- to
4 allow somebody to view those standards, but not be
5 able to download those standards or print those
6 standards. So that would drive demand for those --
7 for those standards.

8 Q. What was ASHRAE's experience in that
9 regard?

10 A. It was -- our experience was that it was
11 relatively flat. It didn't have -- seem to have much
12 of a positive impact, nor in -- in that case did it
13 seem to have a negative impact.

14 Q. Does ASHRAE have information about how many
15 persons have accessed the standards in its reading
16 room?

17 A. We did. We changed the -- the -- the
18 software platform from which they were made available
19 for viewing. We originally used -- we originally
20 used a RealRead vendor-supplied system and then we
21 went -- they went out of business, I believe, and
22 then we switched to iWrapper.

23 But I -- I know for certain when we were
24 with RealRead, we would track the views. There was
25 no registration so we wouldn't know who those people

1 So I -- I would -- I would assume that
2 the -- the largest -- the most substantial revenue
3 stream that they provide to us in royalty comes from
4 network licenses.

5 Q. And how much would you estimate that to be
6 on an annual basis?

7 A. Do you mean the -- the -- the total revenue
8 or the part from -- or the part from network
9 licenses?

10 Q. Let's say the total revenue from
11 value-added resellers to begin with and then
12 understanding whether you can break out network --

13 A. Yeah.

14 Q. -- licenses.

15 A. Our -- our total royalty revenue would be
16 roughly 1.2 million to 1.4 million.

17 Q. And when you identify your total royalty
18 revenue, that revenue number is separate from the
19 revenue number you gave me earlier about publications
20 revenue; is that correct?

21 A. Yes, that's correct.

22 Q. So to understand the total -- I hate to use
23 the word, but monetization value of publications, one
24 would have to add in the publications revenue and the
25 royalty revenue; correct?

1 A. That is correct.

2 Q. What other components would be missing if I
3 had just the publication revenue and the royalty
4 revenue?

5 A. Now, we are speaking just -- of just
6 publications?

7 Q. Right, and really specifically standards.

8 A. Standards. Just running through our
9 financial statements in my mind. That -- that's it.
10 Again, there's educational components that
11 we may use standards in which -- but there's no --
12 but sometimes like we include a standard in a
13 registration fee for a conference, so there's no
14 direct revenue from that standard.

15 But if you added together the royalty sales
16 and you added together our direct sales of
17 publications, that would represent our -- our total
18 publication revenue.

19 Q. Do you have an estimate as to what
20 percentage of that total revenue is attributable, in
21 your mind -- or in ASHRAE's mind, to all versions of
22 90.1?

23 MR. LEWIS: Objection.

24 THE WITNESS: So what percentage of our
25 total publications revenue, if that total

1 revenue is both what we sell and the royalties,
2 what's the component of that that is
3 attributable to --

4 Q. (By Mr. Bridges) 90.1 --

5 A. -- 90.1?

6 Q. -- all versions.

7 A. Yeah. And let me just go through some math
8 as I'm -- as I'm speaking.

9 And this would not be any of the kind of
10 indirect educational or, you know, credibility and
11 other -- other ways that that may impact us.

12 Q. Right.

13 A. Yes, just give me -- okay. Now let me just
14 run through those numbers now.

15 Well, when it gets to the royal- -- the
16 problem is for the royalty part I'm really making
17 guesses, because it's -- because I don't have -- you
18 know, it -- it -- I -- I don't have those numbers,
19 you know, broken down as such.

20 Q. I'll just ask you for your best estimate.

21 A. Best estimate.

22 MR. LEWIS: Objection.

23 THE WITNESS: So the best estimate, if the
24 total was \$450,000 --

25 Q. (By Mr. Bridges) Out of the total.

1 A. Out of the total as an estimate, just
2 conjecturing.

3 Q. Is -- excuse me, I may have -- I don't
4 think I asked the exact same question. I may have
5 asked a similar question earlier. Forgive me if I
6 repeat myself because I'm working on one hour of
7 sleep.

8 Is 90.1 ASHRAE's -- I think -- strike that.
9 I think you said it was ASHRAE's most
10 popular standard; is that correct?

11 A. (Witness nodded head affirmatively.)

12 MR. LEWIS: Objection.

13 Q. (By Mr. Bridges) What would you consider
14 the second most popular standard to be?

15 A. Second I would consider Standard 62.1,
16 which is ventilation requirements for buildings.

17 Q. What would round out the rest of the top
18 five, in your view?

19 A. Top five. Standard 55, which is a thermal
20 comfort standard; Standards 15 and 34, which relate
21 to refrigerant use and -- in air-conditioning and
22 refrigeration systems.

23 Q. I think, based on the number of years
24 you've been at ASHRAE, is it correct that you started
25 at ASHRAE before ASHRAE first published 90.1?

1 context. You nodded, but the court reporter can't
2 take nods down.

3 Do you understand, broadly speaking,
4 monetization of publications through revenue sources
5 like purchasing and licensing and the like?

6 A. Yes.

7 Q. And royalties?

8 A. Yes.

9 Q. What proportion of ASHRAE's yearly revenues
10 comes from the monetization of its standards as
11 publications?

12 A. I'm making sure I'm doing the math right.

13 Q. That's fair. That's fair.

14 A. Let's see. It would be -- directly
15 attributable to standards would be approximately
16 10 percent.

17 Q. How else does ASHRAE earn revenue, other
18 than through the monetization of its standards?

19 A. Membership dues, conference registrations,
20 advertising, subscription sales, educational course
21 registrations, certification, exposition income.

22 And when you said "publications," if -- so
23 in addition to publications, we have books. So
24 books, if -- if -- if -- if that's -- if you
25 distinguish between standards in your questions, then

1 there would be books. And I believe that -- that --
2 that covers it.

3 Q. Roughly what percentage of ASHRAE's
4 expenses pertain to the organization and supervision
5 of the standards development process and the costs of
6 publication and the costs of administering the
7 permissions and distributions and the like?

8 MR. LEWIS: Objection.

9 THE WITNESS: I can speak to the side of
10 that process that deals with the -- the -- the
11 publications part. I do not know what the --
12 the costs would be to support the development of
13 the product. My role begins when we push that
14 standard out to the -- to -- to the marketplace.

15 What would be -- I -- I'd probably say
16 there are staff salaries that would be
17 attributable to standards activities from the
18 publication side of things, production, so on.
19 If you add portions of people's time together,
20 we're probably speaking of four people from the
21 publications side.

22 And then the -- the cost of the
23 infrastructure for the book- -- for the
24 bookstore, the on-line process, and warehousing,
25 and finally the -- the -- the work that may be

1 what a subvention is of a publication?

2 A. I do not.

3 Q. Has ASHRAE ever received any grants to
4 support the publication of any particular standards?

5 A. I have no knowledge of ASHRAE receiving
6 funds for that.

7 Q. Is ASHRAE aware of any monetary losses that
8 it has suffered as a consequence of the defendant's
9 conduct in this case?

10 A. I can't speak to any -- any tracking of --
11 of losses. And anecdotally, people say if -- they've
12 asked me if a standard is available on the Internet,
13 is that -- is that allowed, is that permissible, so
14 we -- in those cases, we will seek to remove them.

15 But we don't -- we -- I don't have any
16 record of tracking such loss of -- of revenue.

17 Q. Apart from tracking it, does ASHRAE have
18 any information regarding monetary losses it has
19 suffered as a consequence of defendant's conduct?

20 A. I -- I do recall there was one message we
21 got from somebody who refer- -- I think it was
22 somebody with Carrier Corporation, if I recall, who
23 referred to -- who referred to that. I don't know if
24 they had intended to purchase or not, but that was
25 one specific case I do recall.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

AMERICAN SOCIETY FOR TESTING AND
MATERIALS d/b/a ASTM INTERNATIONAL;

NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and

AMERICAN SOCIETY OF HEATING,
REFRIGERATING, AND AIR
CONDITIONING ENGINEERS,

Plaintiffs-Counterdefendants,

v.

PUBLIC.RESOURCE.ORG, INC.,

Defendant-Counterclaimant.

Case No. 1:13-cv-01215-TSC-DAR

Action Filed: August 6, 2013

**SUPPLEMENTAL DECLARATION OF CARL MALAMUD IN FURTHER SUPPORT
OF DEFENDANT'S MOTION FOR SUMMARY JUDGMENT**

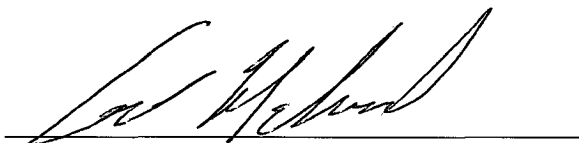
I, Carl Malamud, declare as follows:

1. I am over the age of 18 years and am fully competent to testify to the matters stated in this declaration.
2. This declaration is based on my personal knowledge. If called to do so, I would and could testify to the matters stated herein.
3. I am the President and sole employee of Public.Resource.Org, Inc. ("Public Resource"), which is a 501(c)(3) non-profit corporation headquartered in Sebastopol, California. I have worked at Public Resource since I founded the organization in 2007. It is my only source of employment.

4. Public Resource does not charge for access to the archive of laws and other government authored materials on the domains under the public.resource.org website.
5. In August of 2008, I posted the Alabama Electrical Code, Arkansas Electrical Code, Idaho Electrical Code, Minnesota Electrical Code, North Carolina Electrical Code, North Dakota Electrical Code, New Hampshire Electrical Code, Rhode Island Electrical Code, South Dakota Electrical Code, Utah Electrical Code, and Wyoming Electrical Code to the website law.resource.org.
6. Each of these codes contains the unmodified text of the 2008 National Electrical Code.
7. For instance, the Alabama Electrical Code, Alabama Building Commission Administrative Code chapter 170-X-2, consists of the complete, unmodified 2008 National Electrical Code with five pages of Alabama-specific material placed at the front of the document. Attached to Public Resource's Index of Consolidated Exhibits as **Exhibit 16** is a true and correct copy of the first 34 pages of the Alabama Electrical Code that I posted on the Public Resource website in August of 2008. Because the entire document is over 800 pages I have not included it in its entirety, and Public Resource will have the entire document available at the hearing on Public Resource's Motion for Summary Judgment and requests permission to lodge it or file it formally at the hearing, instead of putting such a large document on PACER. The full document will be made available for Plaintiffs to inspect at their request.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed this 4th day of February, 2016 at Sebastopol, California.

A handwritten signature in black ink, appearing to read 'Carl Malamud', is written over a horizontal line.

Carl Malamud

EXHIBIT 1

EXECUTIVE OFFICE OF THE PRESIDENT
Office of Management and Budget

OMB Circular A-119: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities

AGENCY: Office of Management and Budget, Executive Office of the President

ACTION: Final Revision of OMB Circular A-119

SUMMARY: The Office of Management and Budget (OMB) has revised Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities" (hereinafter, Circular A-119, or, the Circular) in light of developments in regulation, standards, and conformity assessment since the Circular was last revised in 1998.

DATES: Effective upon publication

ADDRESSES: Direct any comments or inquiries to the Office of Information and Regulatory Affairs, Office of Management and Budget at CircularA-119@omb.eop.gov.

SUPPLEMENTARY INFORMATION:

- I. Existing OMB Circular A-119
- II. Discussion and Responses to Significant Comments
- III. Section-by-Section Discussion

Existing OMB Circular A-119. The vibrancy and effectiveness of the U.S. standards system in enabling innovation depends on continued private sector leadership and engagement. Our approach—reliance on private sector leadership, supplemented by Federal government contributions to discrete standardization processes as outlined in OMB Circular A-119—remains the primary strategy for government engagement in standards development.

The policies of Circular A-119 are intended to encourage Federal agencies to benefit from the expertise of the private sector, promote Federal agency participation in standards bodies to support the creation of standards that are useable by Federal agencies, and minimize reliance on government-unique standards where an existing standard would meet the Federal government's objective.

The National Technology Transfer and Advancement Act of 1995 (Public Law 104-113; hereinafter known as "the NTTAA") codified pre-existing policies on the development and use of voluntary consensus standards in OMB Circular A-119, established additional reporting requirements for agencies, and authorized the Department of Commerce's National Institute of Standards and Technology (NIST) to coordinate conformity assessment activities.

Revision of OMB Circular A-119. OMB is revising this Circular in light of developments in regulation, standards, and conformity assessment since the Circular was last revised in 1998. These revisions reflect the experience gained by U.S. agencies in implementing the Circular since 1998, and concluding and implementing U.S. trade agreements, as well as developments in domestic and

international regulatory, standards, and conformity assessment policies.

The revised Circular reflects and supports the regulatory policies and principles set out in relevant executive orders. OMB notes, in particular, the requirements of four executive orders, three of which were issued after 1998:

- Executive Order 12866 (“Regulatory Planning and Review”) states that regulations must be consistent with law; regulations must identify the nature and significance of the problem; agencies must identify and assess alternatives to address the problem along with the costs and benefits of each alternative; and the approach selected should maximize net benefits to society;
- Executive Order 13563 (“Improving Regulation and Regulatory Review”) emphasizes that the U.S. regulatory system “must protect public health, welfare, safety, and [the] environment while promoting economic growth, innovation, competitiveness, and job creation,” and stresses the importance of public participation and careful consideration of both benefits and costs;
- Executive Order 13609 (“Promoting International Regulatory Cooperation”) directs Federal agencies to better coordinate U.S. priorities and positions with respect to international regulatory cooperation efforts across U.S. Federal agencies. This includes promoting good regulatory practices both in the United States and internationally, as appropriate, and considering reforms that address unnecessary differences in regulatory requirements between the United States and its major trading partners; and
- Executive Order 13610 (“Identifying and Reducing Regulatory Burdens”) institutionalizes the retrospective review mechanism set out in Executive Order 13563 and calls on agencies to reduce the cumulative effects, including the cumulative burdens, of regulation.

In addition to the above Executive Orders, on January 17, 2012, OMB’s Office of Information and Regulatory Affairs (OIRA), the Office of Science and Technology Policy (OSTP), and the Office of the United States Trade Representative (USTR) released a Memorandum to Federal agencies on “Principles for Federal Engagement in Standards Activities to Address National Priorities” (see <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-08>).

The revisions to Circular A-119 inform agencies of their statutory obligations in standards-setting activities. Specifically, 19 U.S.C. § 2532 provides that “[n]o Federal agency may engage in any standards-related activity that creates unnecessary obstacles to the foreign commerce of the United States” and specifies four requirements for agencies’ standards-related activities:

1. Ensuring that imported products are not treated less favorably than like domestic products or imported products from other countries;
2. Taking into consideration international standards – and basing standards upon them if appropriate;
3. Developing standards based on performance criteria rather than design criteria when appropriate; and
4. Ensuring foreign suppliers have access to conformity assessment procedures on the same

basis as other domestic and foreign suppliers of like products.

In order to gather relevant information for this revision, OMB published a Request for Information (RFI) in the Federal Register on March 30, 2012 (77 Fed. Reg. 19357) on “whether and how to supplement Circular A-119.” The notice also announced OMB would be holding a public workshop at NIST on May 15, 2012.

The RFI and public workshop allowed interested stakeholders to provide valuable input to OMB, NIST, Federal regulators, and other relevant agencies on how the Federal government should address regulatory, standards, and conformity assessment issues that have emerged or moved to the forefront since the Circular was last promulgated in 1998. OMB received approximately 70 comments from a wide range of stakeholders, including companies, trade associations, academics, public interest groups, standards developing bodies, conformity assessment bodies, and private citizens.¹

In response to those comments from 2012, OMB issued a Request for Comment on a Proposed Revision of OMB Circular A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” on February 11, 2014 (79 Fed. Reg. 8207). OMB received over 80 comments from a wide range of stakeholders including companies and trade associations, academics, public interest groups, standards development bodies, conformity assessment bodies, and private citizens.²

Discussion and Responses to Significant Comments

Although some commenters were critical of specific aspects of the proposed revision, the majority of commenters expressed support for the overall revisions to the Circular and the approaches taken. The more substantive comments are summarized below, along with OMB’s responses.

While OMB carefully considered the proposals and concerns of all commenters, many comments were not germane, given the scope of the Circular. The purpose of the Circular is only to provide guidance on agency use of standards at a level that is practical and useable for all agencies.

For example, OMB received particularly detailed or individualized comments regarding conformity assessment requirements (OMB defers to NIST and its anticipated revisions to its Guidance on Federal Conformity Assessment), country-specific standards policy (OMB defers to USTR), and the publishing requirements for guidance and regulations for agencies (OMB defers to the Office of the Federal Register). The most current version of NIST’s conformity assessment guidance is available at <http://www.nist.gov/standardsgov/>.

Based on OMB’s consideration and responses to these public comments, as well as developments in regulatory, standards, conformity assessment, and trade policy described above, the revised Circular A-119:

¹ Public comments submitted in response to OMB’s RFI can be found at <http://www.regulations.gov/#!documentDetail;D=OMB-2012-0003-0001>.

² Public comments submitted in response to the Proposed Revisions can be found at <http://www.regulations.gov/#!documentDetail;D=OMB-2014-0001-0001>.

- provides additional guidance for agency participation in standards development activities, including with respect to serving on standards technical committees as well as the boards of standards developing bodies;
- provides factors for agencies to consider when evaluating whether to use a standard to meet agency needs;
- strengthens the role of agency Standards Executives to encourage better internal coordination and training on standards;
- updates the provisions on how the U.S. Government manages and reports on the development and use of standards;
- sets out factors for agencies to consider when assessing the effectiveness of conformity assessment options and determining the type(s) of conformity assessment program(s) to employ;
- provides guidance to agencies on how they should implement provisions of the Circular in their rulemakings and guidance documents;
- encourages each agency to alert the public through the Federal Register or the agency's webpage when the agency is considering whether to participate in the standards development process of a particular body. Such notification would give the public notice that the agency may use the resulting standard in support of significant regulatory action, international regulatory cooperation activities or to otherwise address issues of national priority;
- provides guidance to agencies on what factors to consider when incorporating standards by reference in regulation;
- requires agencies to utilize the retrospective review mechanism set out in Executive Orders 13563 and 13610, to ensure, among other things, that regulations incorporating standards by reference are updated on a timely basis;
- encourages agencies to work together to reference the same version of standards in regulation and procurements and coordinate on conformity assessment requirements, where feasible;
- incorporates references to trade-related statutory obligations on standards-related measures and directs Federal agencies to consult with USTR on how to comply with international obligations with regard to standards, technical regulations, and conformity assessment; and
- maintains a strong preference for using voluntary consensus standards over government-unique standards in Federal regulation and procurement.

The Circular does not preclude the use of standards other than voluntary consensus standards in rulemaking, procurement or other program activities in cases where: voluntary consensus standards do not exist or where use of existing voluntary consensus standards would be inconsistent with law or otherwise impractical, including where use of a voluntary consensus standard would not be as effective at meeting the agency's regulatory, procurement, or program needs. The Circular also recommends that the agency consider allowing the use of other standards as alternative means for complying with agency regulatory, procurement, or program requirements based on voluntary consensus standards where such other standards are also found to be suitable under the agency's analysis.

Promoting Voluntary Consensus Standards: Comments received overwhelmingly supported a continued preference for Federal agencies' use of voluntary consensus standards in lieu of developing their own standards, in line with the existing Circular and the requirements of Section 12(d) of the NTTAA.

There was also significant support among the commenters for providing Federal agencies the flexibility to choose among standards developed in the private sector, particularly standards developed for emerging technologies that may or may not precisely follow the traditional voluntary consensus standards development process. As such, and in order for agencies to choose the best standards for their mission needs, this policy maintains flexibility for agencies to use standards developed in the private sector that best meet agencies' regulatory, procurement, or program needs, whether or not those standards are developed by voluntary consensus standards bodies. To assist agencies in deciding which standards to use, the Circular identifies factors to consider including, among others, the effectiveness and suitability of the standard for meeting agency regulatory, procurement, or program needs, the extent to which a standard meets the definition of a "voluntary consensus standard," and whether the standard is reasonably available.

Along these lines, many respondents provided valuable comments regarding the revised definitions in the Circular. The revised Circular incorporates a number of these suggestions intended to clarify the qualifications for a voluntary consensus standards development process.

Several commenters asked for clarification on how the Circular addresses "leadership standards" (a term used to describe standards that exceed minimum threshold requirements). The Circular does not view leadership standards as different from other types of standards. As always, the Circular will indicate a preference for voluntary consensus standards over government-unique standards, and agencies may build on those standards as necessary to fulfill their obligations.

In addition, the Circular does not indicate a preference for one type of conformity assessment procedure (*e.g.*, supplier's declaration of conformity, third-party certification) over others. Agencies must have flexibility to determine the most appropriate conformity assessment program to meet agency needs, consistent with law (see Section 7 of the Circular).

OMB further notes the Circular serves as a floor—not a ceiling—for when and how an agency should use standards. Agencies can, and in many cases will, have additional guidance for agency components or programs based on mission needs and other factors.

Updating Considerations for Conformity Assessment: Commenters who addressed this issue

expressed moderate to very strong support for OMB providing guidance to agencies with respect to conformity assessment. Commenters recommended that the Circular encourage agencies to rely on private sector conformity assessment activities; provide criteria for agencies to utilize when determining how to best meet their needs; and help agencies comply with relevant international obligations regarding conformity assessment. Since the Circular was last published in 1998, the evolution of an increasingly globalized marketplace has induced growth in the scope and importance of conformity assessment. Global supply and distribution chains may mean a greater number of variables for agencies to assess and more complex logistics to account for when conducting assessments of conformity. Accordingly, the revised Circular encourages agencies to consider leveraging existing private sector conformity assessment activities wherever consistent with law and mission.

Ensuring Compliance with International Obligations: Numerous commenters on the RFI and the Proposed Revision support OMB guidance to agencies on how to comply with relevant international obligations, including the WTO Agreement on Technical Barriers to Trade and other trade agreements. Accordingly, OMB in coordination with USTR, which has statutory authority in this area pursuant to 19 U.S.C. § § 2171 & 2541, has updated the Circular to reflect this need.

The Circular directs Federal agencies to consult with USTR on how to comply with international trade obligations relating to standards, technical regulations and conformity assessment, including those codified at 19 U.S.C. § 2531. In addition, the revisions direct Federal agencies to consult with the State Department, to the extent international obligations other than trade obligations may be implicated. With respect to the Federal government's formulation of international policies on standards and conformity assessment, regulation, and trade, the revisions would encourage, consistent with Executive Order 13609, greater coordination between the Interagency Committee on Standards Policy, the Regulatory Working Group, the Trade Policy Staff Committee and its subcommittees, and any other relevant interagency groups or committees.

Several commenters to the Proposed Revision voiced concerns over specific issues regarding reciprocity of standards use or recognition by other countries or trade unions. Since these comments fall outside the Circular's scope of providing guidance to agencies about the Federal government's use of standards, OMB encourages parties to address such concerns directly with USTR.

Agency Considerations for Incorporation By Reference: A wide variety of commenters representing public interest groups, individuals, citizens, standards development organizations (SDOs), and companies provided comment on the question of incorporation by reference. Some comments advocated for the maintenance of current law and policy, noting many SDOs already freely publish their standards online in read-only formats, while others urged all standards incorporated by reference be made freely available on the Internet.

The majority of these comments turned on particular interpretations of the "reasonably available" requirement in the Freedom of Information Act (FOIA), which requires that standards incorporated into regulation by reference be made reasonably available to the "class of persons affected." As noted in the Draft Revision, it is not within the purview of the Circular to define reasonable availability. Rather, it is by statute the responsibility of the Office of the Federal Register (OFR) to

address this issue.³ OFR revised its regulations on incorporation by reference in a final rule published November 7, 2014 at 79 Fed. Reg. 66267. In that rule, OFR balanced its statutory obligations regarding reasonable availability of the standards with: (1) U.S. copyright law, (2) U.S. international trade obligations, and (3) agencies' ability to substantively regulate under their authorizing statutes. To address all of these obligations, the OFR rule required that agencies discuss how materials incorporated by reference were made available to parties (and where those materials are located) and to provide a summary of those materials in the preambles of their rulemaking documents. These requirements oblige agencies to provide more information on how they make material incorporated by reference available and a summary of the material, so readers can, if they like, find and review the standards.

The revised Circular provides a non-exclusive set of factors to help agencies assess the availability of specific standards for particular regulatory contexts. These considerations may therefore inform the larger agency decision of whether to request approval for incorporation of those standards in regulation. As explained in the revised Circular, the basis of these factors for consideration is the Administrative Conference of the United States (ACUS) Recommendation 2011-5, *Incorporation by Reference*, 77 Fed. Reg. 2257 (January 17, 2012).⁴ ACUS adopted the Recommendation through a consensus process in which a broad array of stakeholders participated, including standards developing bodies, academics, public interest groups, regulators, and industry. Based on the comments, the revised Circular bases its policy on the ACUS Recommendation, modified to enhance clarity.

In general, the factors based on the ACUS Recommendation were well received, particularly the provision by SDOs of read-only access to their standards. OMB received numerous comments from SDOs highlighting the widespread existence of such a practice. In response to comments, OMB amended the Circular to recommend that agencies also consider the ease of access, registration, and navigation on those sites. OMB also received many comments on the option to provide a “freely available, non-technical summary.” Some commenters expressed the need for greater clarity as to what this might entail. Other commenters questioned the feasibility or utility of a non-technical summary for lengthy, complex, and/or highly technical standards. To clarify, OMB modified this factor to encourage agency discretion and collaboration with SDOs to enhance practical, impactful improvements to availability on a case-by-case basis.

Additionally, OMB made clarifications emphasizing that: (1) the absence of one or more of such factors should not prevent an agency from using a particular standard; (2) agencies should work closely with SDOs to determine appropriate access to the standards for stakeholders; and (3) agencies should explain the reasoning for their choice of standard, including an explanation of how that standard may be accessed by stakeholders.

Strengthening Guidance for Agency Participation in the Standards Development Process and the Role of Agency Standards Executives: Commenters expressed wide support for increased guidance for agency participation, including in standards development voting and standards body governance. As a floor, the revised Circular encourages agencies to participate fully in the standards development process—through voting as well as standards body governance—as equal

³ See 5 U.S.C. §552(a)(1).

⁴ See <http://www.gpo.gov/fdsys/pkg/FR-2012-01-17/html/2012-621.htm>.

parties. OMB, however, defers to individual agencies on their policies for determining to what extent and under what circumstances agency representatives are authorized to engage in particular activities, based on agency requirements and priorities. Additionally, the Circular encourages strong coordination by Agency Standards Executives (ASEs) to allow for effective use of agency resources in the standards development process.

In response to requests for greater notice by agencies of their involvement in the standards development process, the revised Circular provides guidance to agencies on how they should discuss implementation of the Circular in their rulemakings and guidance documents. The revised Circular also encourages each agency to alert the public through the Federal Register and/or its webpage when the agency is considering whether to participate in the standards development process of a particular body, with the intention of using the resulting standard to support significant regulatory action, promote international regulatory cooperation activities, or address issues of national priority. Many of the comments regarding agency participation included agency-specific details that are beyond the scope of the Circular. OMB encourages commenters to contact agencies directly with feedback regarding their voting, travel, or any other policies.

Ensuring the Timely Updating of Regulations and Other Agency Materials Incorporating Standards: Many commenters expressed views on whether the most current version of a standard should always be the one used by an agency. OMB recognizes that agencies may have good reasons for not using the most recent version of a standard. For example, if use of a revised standard significantly increases compliance costs that are not justified by the benefits of using the standard, the agency should be free to decline to adopt it.

To ensure the timely updating of standards, the revised Circular requires agencies to utilize the retrospective review mechanism set out in Executive Orders 13563 and 13610. Many commenters voiced strong support for such periodic review, with many agreeing with the suggested three-to-five year review timeframe. OMB believes the use of retrospective review, as outlined by Executive Orders 13563 and 13610, can help ensure (1) the optimal version of a standard is being used by agencies; (2) agencies minimize the impact of conflicting requirements on their shared regulated entities due to references to different versions of standards; and (3), more broadly, the need for the standard and the regulation referencing it still exists.

Additionally, in response to comments, OMB encourages agencies to work closely with SDOs to ensure agencies are aware of, and thus able to consider, updates and alternatives to existing standards. OMB also encourages agencies to work together to reference the same version of standards in regulation and procurements, consistent with statute and agency mission and objectives.

OMB also received comments on specific provisions of the Proposed Circular. Below are the significant comments OMB received and our responses.

Section-by-Section Discussion

Proposed Section 3e—Definition of Voluntary Consensus Standard. Final Section 2d.

Several clarifications have been made to the definition to increase its technical accuracy (no substantive changes are intended). A commenter suggested that the definition, which states that a voluntary consensus standard needs to be either developed or adopted by a voluntary consensus standards body, be clarified to make clear that the standard at issue was developed or adopted through the use of a voluntary consensus standards development process. OMB agrees and has clarified the final Circular accordingly.

Several other clarifications have been made. We have clarified that it is the voluntary consensus standard bodies, not the standards, which have intellectual property policies. We have also clarified that the Reasonable and Non-discriminatory (RAND) license obligations extend to “implementers of the standard” (this replaces the term “all interested parties,” which is a term of art in the rulemaking context).

Lastly, the Federal government does not make a distinction between standards bodies based on where they are domiciled, but rather with respect to the attributes that characterize their processes for standards development. Thus, we have deleted the phrase “both domestic and international.” This edit is not intended to make a change in terms of coverage (the Circular includes a discussion of “international standards” at Section 5h and 5i).

Proposed Section 3f(i)—Definition of Openness. Final Section 2e(i).

Many commenters expressed concern with the potential burden of the “at all stages” part of the clause requiring SDOs to provide meaningful opportunities to participate. Several commenters noted that, as a practical matter, this need is already covered by the requirements for transparent procedures or processes and for due process. In response, OMB modified the final Circular to omit the reference to “at all stages” and clarify that opportunities to participate in standards development be on a non-discriminatory basis.

Proposed Section 3f(ii)—Definition of Balance of Representation. Final Section 2e(ii)—Definition of Balance.

Several commenters questioned the utility of changing this element from “balance of interest,” found in the current version of Circular A-119 as well as the American National Standards Institute’s (ANSI) Essential Requirements, to “balance of representation.” OMB intended for the definition to be consistent with the concepts of both those documents and has simplified the term to “balance” to avoid confusion and to allow for flexibility in how balance is determined during the consensus phase of the development or adoption of the standard.

Additionally, some commenters expressed concern with the ambiguity of “sectors” in this definition. Others commented that a key objective of “balance” is preventing a single interest from dominating the decision-making process. OMB agrees and modified the final Circular, adapting suggested insertions to the text of the definition.

Proposed Section 3f(iii)—Definition of Due Process. Final Section 2e(iii).

Several commenters expressed concern with the burden and practicality of requiring “full access” to the views and objections of other participants in standards development. Commenters noted the risks of micromanagement and unnecessary overreach. OMB’s intention is to ensure an adequate record of proceedings for the purpose of resolving objections and appeals, so we have modified the final Circular to reflect this intent.

Proposed Section 6e—When deciding to use a standard, what are some of the factors my agency should consider? Final Section 5a.

Several commenters expressed a desire for greater clarity in the relationship between agency missions and the preference for voluntary consensus standards over government-unique standards. OMB agrees, and therefore the Circular maintains the preference for voluntary consensus standards, per the NTTAA, while still maintaining flexibility for agencies to best meet their missions.

Additionally, some commenters highlighted the utility of considering the extent to which a standard is already used by a Federal agency, by State and local governments, as well as the prevalence of the standard in the national and international marketplace. These are important considerations precisely aligned with Executive Orders 13563, 13609, and 13610, discussed above. Accordingly, OMB agrees, and modified the Circular to include these considerations.

Proposed Section 4g—How should my agency determine whether a voluntary standard is “reasonably available” in a regulatory or non-regulatory context? Final Section 5f -- What factors should my agency consider to aid the determination of whether a standard is “reasonably available” in a regulatory or non-regulatory context?

In general, the factors based on the ACUS Recommendation were well received, particularly SDO provision of read-only access to standards. OMB received numerous comments from SDOs noting they already provide such access. One commenter, however, brought to OMB’s attention the disparate capabilities and requirements of various read-only standards websites. OMB agrees that this should be a consideration, and has amended the text to recommend agencies also consider the ease of access, registration, and navigation on those websites.

As referenced above, OMB also received many comments on the option to provide a “freely available, non-technical summary.” Some commenters expressed the need for greater clarity as to what this might entail. Other commenters questioned the feasibility or utility of providing a non-technical summary for lengthy, complex, and highly technical standards. To clarify, OMB modified this factor and potential option to encourage agency discretion and cooperation with SDOs to enhance practical, impactful improvements to availability on a case-by-case basis.

Additionally, in response to several comments asking for greater agency consideration of the accessibility of standards incorporated by reference, OMB revised the Circular to recommend that agencies provide, in the preamble of a Notice of Proposed Rulemaking (NPRM) or final rule or guidance document, an explanation of the incorporated materials;

how such incorporated standards may be accessed; and how the agency's incorporation by reference of the standard would further the agency's regulatory objective.

Proposed Section 7—What is the Policy for Federal Participation in Voluntary Standards Bodies?
Final Section 6 -- What is the Policy for Federal participation in Voluntary Consensus Standards Bodies?

Several commenters questioned the reformatting of this section from the existing Circular, specifically the absence of explicit authorization to provide "direct financial support" to standards development activities. Many agencies do so, consistent with applicable law, and here OMB defers to agency policy. To provide agencies with flexibility to meet their missions, the Circular maintains the existing language.

Proposed Section 8a—What considerations should my agency make when it is determining the type of conformity assessment procedure(s) to use? Final Section 7a—What considerations should my agency make when it is addressing the need for conformity assessment?

In response to comments, OMB simplified this section. OMB has incorporated the previous Section 8a, "Should my agency consider relying on private sector conformity assessment activities in conjunction with, or where appropriate, in lieu of governmental conformity assessment?" into one question which is now Section 7a, "What considerations should my agency make when it is addressing the need for conformity assessment?"

Additionally several commenters expressed concern over the apparent distinction between using "international conformity assessment schemes" or "private sector conformity assessment activities" as was phrased in the proposed revision. OMB agrees that such international conformity assessment schemes are just one example of private sector conformity assessment activity, and modified the Circular accordingly.

Accordingly, OMB Circular A-119 is revised as set forth below.

Howard Shelanski

Administrator, Office of Information and Regulatory Affairs

EXECUTIVE OFFICE OF THE PRESIDENT
Office of Management and Budget

Washington D.C. 20503

[insert date]

Circular No. A-119

Revised

CIRCULAR NO. A-119, Revised

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities

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BACKGROUND

1. What is the Purpose of this Circular?

This Circular establishes policies to improve the internal management of the Executive Branch with respect to the U.S. Government's role in the development and use of standards and conformity assessment. Consistent with section 12(d) of P.L. 104-113, the "National Technology Transfer and Advancement Act of 1995," as amended (hereinafter "the NTTAA"), and U.S. Government executive orders, this Circular directs agencies to use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical. The policies in this Circular are intended to facilitate agencies' compliance with obligations under U.S. trade statutes and trade agreements. U.S. Federal law (19 U.S.C. § 2532) specifically prohibits any U.S. Government agency from engaging in standards-related activities that create unnecessary obstacles to the foreign commerce of the United States.

This Circular provides guidance for agencies participating in the work of voluntary consensus standards bodies and describes procedures for satisfying the reporting requirements of the NTTAA. The policies in this Circular are intended to minimize the reliance by agencies on government-unique standards. The Circular also provides policy guidance to agencies on the use of conformity assessment in procurement, regulatory, and program activities. This Circular replaces Office of Management and Budget (OMB) Circular No. A-119, dated February 10, 1998.

Many voluntary consensus standards are appropriate or adaptable for the Federal government's purposes. The use of such standards, whenever practicable and appropriate, is intended to achieve the following goals:

- (i) eliminating the cost to the Federal government of developing its own standards and decreasing the cost of goods procured and the burden of complying with agency regulation;
- (ii) providing incentives and opportunities to establish standards that serve national needs, encouraging long-term growth for U.S. enterprises and promoting efficiency, economic competition, and trade; and
- (iii) furthering the reliance upon private sector expertise to supply the Federal government with cost-efficient goods and services.

This Circular will also help agencies meet the five fundamental strategic objectives for Federal engagement in standards activities set out in Memorandum M-12-08, "Principles for Federal Engagement in Standards Activities to Address National Priorities" (http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-08_1.pdf), which was issued on January 17, 2012.

While M-12-08 applies to Federal engagement in standards activities in those exceptional circumstances where the U.S. Government is playing a leading or convening role, OMB believes that the objectives are generally applicable to Federal engagement in standards and conformity assessment activities, absent contrary statutory requirements.

In addition, the Circular seeks to support efforts by the Federal government to ensure that:

- a. the benefits of regulations justify their costs, consistent with Executive Orders 12866, "Regulatory Planning and Review," and 13563, "Improving Regulation and Regulatory Review," and OMB Circular A-4, "Regulatory Analysis";
- b. agencies modify, streamline, expand, or repeal regulations that may be outmoded, ineffective, insufficient, or excessively burdensome through the retrospective review process, consistent with Executive Orders 13563 and 13610, "Identifying and Reducing Regulatory Burdens";
- c. agencies work with their regulatory counterparts in other countries to address common health, safety, labor, security, or environmental issues, as well as unnecessary differences between the regulatory approaches of U.S. agencies and those of their foreign counterparts that may impair economic growth, innovation, competitiveness, and job creation, consistent with Executive Order 13609, "Promoting International Regulatory Cooperation"; and
- d. agencies consider the cumulative effects, including the cumulative burdens, of regulation, consistent with Executive Order 13610.

DEFINITIONS

2. What is a Standard?

- a. The term "standard," or "technical standard," (hereinafter "standard") as cited in the NTTAA, includes all of the following:
 - (i) common and repeated use of rules, conditions, guidelines or characteristics for products or related processes and production methods, and related management systems practices;
 - (ii) the definition of terms; classification of components; delineation of procedures; specification of dimensions, materials, performance, designs, or operations; measurement of quality and quantity in describing materials, processes, products, systems, services, or practices; test methods and sampling procedures; formats for information and communication exchange; or descriptions of fit and measurements of size or strength; and
 - (iii) terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process, or production method.
- b. The term "standard" does not include the following:
 - (i) professional standards of personal conduct; or
 - (ii) institutional codes of ethics.

- c. “Government-unique standard” is a standard developed by and for use by the Federal government in its regulations, procurements, or other program areas specifically for government use (*i.e.*, it is not generally used by the private sector unless required by regulation, procurement, or program participation). The standard was not developed as a voluntary consensus standard as described in Sections 2d and 2e.
- d. “Voluntary consensus standard” is a type of standard developed or adopted by voluntary consensus standards bodies, through the use of a voluntary consensus standards development process as described in Section 2e. These bodies often have intellectual property rights (IPR) policies that include provisions requiring that owners of relevant patented technology incorporated into a standard make that intellectual property available to implementers of the standard on non-discriminatory and royalty-free or reasonable royalty terms (and to bind subsequent owners of standards essential patents to the same terms). In order to qualify as a “voluntary consensus standard” for the purposes of this Circular, a standard that includes patented technology needs to be governed by such policies, which should be easily accessible, set out clear rules governing the disclosure and licensing of the relevant intellectual property, and take into account the interests of all stakeholders, including the IPR holders and those seeking to implement the standard.
- e. “Voluntary consensus standards body” is a type of association, organization, or technical society that plans, develops, establishes, or coordinates voluntary consensus standards using a voluntary consensus standards development process that includes the following attributes or elements:
 - (i) Openness: The procedures or processes used are open to interested parties. Such parties are provided meaningful opportunities to participate in standards development on a non-discriminatory basis. The procedures or processes for participating in standards development and for developing the standard are transparent.
 - (ii) Balance: The standards development process should be balanced. Specifically, there should be meaningful involvement from a broad range of parties, with no single interest dominating the decision-making.
 - (iii) Due process: Due process shall include documented and publically available policies and procedures, adequate notice of meetings and standards development, sufficient time to review drafts and prepare views and objections, access to views and objections of other participants, and a fair and impartial process for resolving conflicting views.
 - (iv) Appeals process: An appeals process shall be available for the impartial handling of procedural appeals.
 - (v) Consensus: Consensus is defined as general agreement, but not necessarily unanimity. During the development of consensus, comments and objections are considered using fair, impartial, open, and transparent processes.

See Section 5h of this Circular for a discussion of “international standards.”

3. What is Conformity Assessment?

Conformity assessment” is a demonstration, whether directly or indirectly, that specified requirements relating to a product, process, system, person, or body are fulfilled. Conformity assessment includes sampling and testing, inspection, supplier’s declaration of conformity, certification, and management system assessment and registration. Conformity assessment also includes accreditation of the competence of those activities.

POLICY

4. To Whom Does This Policy Apply?

This Circular applies to all agencies and agency representatives who use standards or conformity assessment and/or participate in the development of standards. “Agency” means any executive department, independent commission, board, bureau, office, government-owned or controlled corporation, or other establishment of the Federal government. It also includes any regulatory commission or board, except for independent regulatory commissions insofar as they are subject to separate statutory requirements regarding the use of voluntary consensus standards. It does not include the Legislative or Judicial branches of the Federal government.

5. What is the Policy for Federal Use of Standards?

Consistent with Section 12 (d)(1) of the NTTAA, all Federal agencies must use voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical. In these circumstances, your agency must submit a report describing the reason(s) for its use of government-unique standards in lieu of voluntary consensus standards as explained in Sections 9-11.

a. When deciding to use a standard, what are some of the factors my agency should consider?

- (i) In evaluating whether to use a standard, which should be done on a case-by-case basis, an agency should consider the following factors, where applicable:
 - (1) Whether the standard is effective and otherwise suitable for meeting agency regulatory, procurement, or program needs, including as applicable:
 - (a) the nature of the agency’s statutory mandate and the consistency of the standard with that mandate;
 - (b) the level of protection the standard provides or is expected to provide for public health, welfare, safety, and the environment;
 - (c) the clarity and detail of the standard's language, as the wording of a standard may contain too much detail as well as too little;

- (d) the costs and benefits of implementing other available standards that may also meet the agency's needs;
 - (e) the costs and benefits to the Federal government and the regulated public of the agency developing its own standard;
 - (f) the ongoing use of the standard by other agencies for the same or a similar requirement, the use of which in a particular instance would increase consistency across the Federal government;
 - (g) the ongoing use of the standard by State and local governments for the same or a similar requirement, the use of which in a particular instance would increase consistency across jurisdictions;
 - (h) the prevalence of the use of the standard in the national and international marketplaces;
 - (i) the problems addressed by the standard and changes in the state of knowledge and technology since the standard was prepared or last revised;
 - (j) the extent to which the standard establishes performance rather than design criteria, where feasible;
 - (k) the ability of small- and medium-sized enterprises (SMEs) to comply with the standard; and
 - (l) the agency's ability to use, and enforce compliance with, the standard in its regulatory process.
- (2) The extent to which, when preparing the standard, the standards body reflected the attributes of a voluntary consensus standards body set out in Section 2e of the Circular. The procedures related to these attributes (*e.g.*, openness, balance, due process, appeals process, and consensus) should be easily accessible, clear and unambiguous.
- (3) The extent to which the standard is an international standard (see Section 5h).
- (4) Any barriers to membership and participation in the standards development process, given that fee structures, modes of participation, and other factors can impact the ability of SMEs, public interest groups, and the general public to participate.
- (5) Whether the standard is "reasonably available." See Section 5f of the Circular for additional information.
- (6) The standards maintenance process used by the relevant standards developing body or bodies.
- (ii) If an agency is proposing to use a standard in a proposed or final rulemaking, the agency must comply with the "Principles of Regulation" (enumerated in Section 1(b) of Executive Order 12866, "Regulatory Planning and Review"), the analytical requirements of other relevant executive orders, and other documents as applicable, including those described in Section 1 of the Circular.
- (iii) As a general matter, standards being considered for use in regulation that specify

nomenclature, basic reference units, or methods of measurement or testing, and that are primarily empirical in their formulation, will ordinarily warrant less scrutiny by an agency than standards that embody factors that are less objective.

- (iv) An agency should, to the extent permitted by law, take account of the effect of using the standard on the economy, and of applicable Federal laws and policies, including laws and regulations relating to antitrust, national security, small business, product safety, environment, metrication, technology development, international trade, intellectual property and copyright, privacy and security, and conflicts of interest.
- (v) An agency should take into consideration the standards developer's intellectual property rights (IPR) policies. Many standards developing bodies have policies requiring participating IPR holders to commit to license any relevant patented technology incorporated into a standard on non-discriminatory and royalty-free or reasonable royalty terms and to bind subsequent owners of standards-essential patents to the same terms. Such policies should be easily accessible, set out clear rules governing the disclosure and licensing of the relevant IPR, and take into account the interests of all stakeholders, including the IPR holders and those seeking to implement the standard.

- b. Does this policy establish a preference between voluntary consensus standards and other types of standards?** Consistent with Section 12(d)(1) of the NTTAA, this policy establishes a preference for the use of voluntary consensus standards in lieu of government-unique standards. The Circular does not preclude the use of other standards in rulemaking, procurement, or other program activities in cases where voluntary consensus standards do not exist or use of existing voluntary consensus standards would be inconsistent with law or otherwise impractical, including where use of a voluntary consensus standard would not be as effective at meeting the agency's regulatory, procurement or program needs. The Circular also recommends that the agency consider allowing the use of other standards as alternative means for complying with agency regulatory, procurement, or program requirements that incorporate voluntary consensus standards, where such other standards are also found to be suitable under the agency's analysis. See Section 5I concerning the selection of multiple standards.
- c. When must my agency use voluntary consensus standards?** Your agency must use voluntary consensus standards in its regulatory, procurement, and program activities in lieu of government-unique standards, unless use of such standards would be inconsistent with applicable law or otherwise impractical. In all cases, your agency has the discretion to decline to use existing voluntary consensus standards if your agency determines that such standards are inconsistent with applicable law or otherwise impractical, and instead to use a government-unique standard or other standard.

In addition to consideration of voluntary consensus standards, this Circular recognizes the contributions of standardization activities that take place outside of the voluntary consensus standards process. Therefore, in instances where use of voluntary consensus standards would be inconsistent with applicable law or otherwise impracticable (*e.g.*, no voluntary consensus standard would be effective in meeting agency regulatory, procurement, or

program needs), agencies should consider, to the extent consistent with applicable law – as an alternative to using a government-unique standard – other standards that meet the agency’s regulatory, procurement or program needs, deliver favorable technical and economic outcomes (such as improved interoperability) and are widely utilized in the marketplace.

In those circumstances where an agency elects to use or develop a government-unique standard in lieu of using a voluntary consensus standard, Section 12(d) of the NTTAA requires the agency to submit a report describing the reason(s) to OMB. Under the Circular, this report is submitted to OMB through the National Institute of Standards and Technology (NIST). For more information on reporting, see Sections 9 -11 of this Circular.

- (i) “Use” means incorporation of a standard in whole, in part, or by reference for procurement purposes; inclusion of a standard in whole, in part, or by reference in regulation(s); or inclusion of a standard in whole, in part, or by reference in other mission-related activities.
- (ii) “Impractical” includes circumstances in which such use would fail to serve the agency's regulatory, procurement, or program needs; be infeasible; be inadequate, ineffectual, inefficient, or inconsistent with the agency mission or the goals of using voluntary consensus standards; be inconsistent with a provision of law; or impose more burdens, or be less useful, than the use of another standard.

- d. What if no voluntary consensus standard exists?** In cases where no suitable voluntary consensus standards exist, an agency may use suitable standards that are not developed by voluntary consensus bodies. In addition, an agency may develop its own standards or use other government-unique standards, solicit interest from qualified standards development organizations for development of a standard, or develop a standard utilizing the process principles outlined in Section 2e of the Circular. As explained above (see Section 5c of the Circular), Section 12(d) of the NTTAA provides that an agency may use a government-unique standard in lieu of a voluntary consensus standard if the use of a voluntary consensus standard would be inconsistent with applicable law or otherwise impractical. In such cases, the agency must file the statutorily required report (see Section 10).
- e. Should my agency give preference to performance standards?** Yes. Pursuant to Section 1(b)(8) of Executive Order 12866 and 19 U.S.C. § 2532(3), your agency should give preference to performance standards where feasible and appropriate. The term “performance standard” refers to a standard that states requirements in terms of required results, but without stating the methods for achieving the required results. A performance standard may define the functional requirements for an item, operational requirements, and/or interface and interchangeability characteristics. A prescriptive standard, by contrast, may specify design requirements, such as materials to be used, how a requirement is to be achieved, or how an item is to be fabricated or constructed. It is important to recognize that, in many instances, a standard may contain both performance and prescriptive elements. In such cases, agencies should select standards that provide the most flexibility for achieving the desired results. In most instances, these will be standards that rely more heavily on performance-based criteria.
- f. What factors should my agency consider to aid the determination of whether a standard**

is “reasonably available” in a regulatory or non-regulatory context? In determining whether a standard is “reasonably available” to regulated and other interested parties, agencies should take into account the following factors, given that reasonable availability is context-specific. The absence of one or more of these factors alone should not be used as a basis for an agency decision not to use the standard. This section shall also be applied in a manner consistent with U.S. international obligations to use relevant international standards (see Section 5h of the Circular); the “Principles of Regulation” (enumerated in Section 1(b) of Executive Order 12866); and the need to “protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation” (see Section 1 of Executive Order 13563).

Factors to consider include:

- (i) whether the standards developer is willing to make read-only access to the standard available for free on its website during the comment period to facilitate more effective access, because access may be necessary during rulemaking to make public participation in the rulemaking process effective;
- (ii) the cost to regulated and other interested parties to access a copy of the material, including the cumulative cost to obtain incorporated materials, and their ability to bear the costs of accessing such materials in a particular context;
- (iii) the extent particular access is needed to achieve agency policy or to subject the effectiveness of agency programs to public scrutiny; and
- (iv) whether the standards developer can provide a summary that explains the content of the standard in a way that meets agency needs and is understandable to a member of the public who lacks relevant technical expertise.

When considering incorporation by reference, agencies should include in the preamble of an NPRM, final rule, or guidance document an explanation of the incorporated materials, and how the agency’s incorporation by reference of the standard would further the agency’s regulatory objective (see 79 FR 66267 published November 7, 2014 entitled Incorporation by Reference).

If an agency incorporates by reference material that is already freely available, the agency should ensure that the material is available electronically in a location where regulated and other interested parties will be able to find it easily by, for example, providing a link to the website of the standards body. If an agency incorporates by reference material that is copyrighted or otherwise subject to legal protection and not freely available, the agency should work with the relevant standards developer to promote the availability of the materials, consistent with applicable law, such as through the use of technological solutions, low-cost-publication, or other appropriate means, while respecting the copyright owner’s interest in protecting its intellectual property. To this end, the agency should explain, in the preamble of an NPRM, final rule, or guidance document how such incorporated standards may be accessed consistent with OFR’s regulations in 1 CFR Part 51.

- g. How should my agency reference standards?** Where your agency seeks to incorporate a standard by reference, your agency should reference the standard, along with sources from

which a copy of the standard may be obtained, in relevant publications, regulations, and related internal documents. The Office of the Federal Register's regulations at 1 CFR Part 51 govern the use of incorporation by reference in regulation. For all other uses, your agency must determine the most appropriate form of reference. If a standard is used and published in an agency document, your agency must observe and protect the rights of the copyright holder and meet any other similar obligations, such as those relating to patented technology that must be used to comply with the standard.

- h. Are there standards-related international trade obligations that agencies must adhere to regarding the use of standards?** Yes. There are statutory and international obligations governing "standards-related activities." In particular, agencies should be aware of the obligations in 19 U.S.C. § 2532, which provides that "[n]o Federal agency may engage in any standards-related activity that creates unnecessary obstacles to the foreign commerce of the United States..." and that "[e]ach Federal agency shall ensure, in applying standards-related activities with respect to any imported product, that such product is treated no less favorably than are like domestic or imported products..." "Standards-related activity" is defined in 19 U.S.C. § 2571 and covers certain standards and technical regulations as well as conformity assessment procedures. These statutory requirements reflect U.S. international obligations under the World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT Agreement). Specifically, Articles 2.1 and 2.2 and Annex 3 of the Agreement commit the United States, with respect to standards and technical regulations, to provide no less favorable treatment to imported products than like domestic products and to avoid unnecessary obstacles to trade.

In addition, the United States is obligated under the TBT Agreement to use relevant international standards, except where such standards would be an ineffective or inappropriate means to fulfill the legitimate objective pursued. In particular, the TBT Agreement, Article 2.4, provides that: "Where technical regulations are required and relevant international standards exist or their completion is imminent, [WTO] Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems." In addition, 19 U.S.C. § 2532 directs Federal agencies, in developing standards, to base the standards on international standards if appropriate.

The WTO TBT Agreement defines "technical regulation" as a document which sets out product characteristics or their related processes and production methods, including applicable administrative provisions, with which compliance is mandatory, and states that the definition may include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process, or production method. The WTO TBT Agreement excludes services, sanitary and phytosanitary measures, and government procurement from its scope. These areas are covered by other WTO agreements discussed later in this section.

The WTO TBT Agreement does not provide a list of bodies that develop international standards. However, in 2000, the WTO Committee on Technical Barriers to Trade adopted

a decision setting out principles that standards bodies should follow when developing international standards (the Decision on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the WTO Agreement on Technical Barriers to Trade, hereinafter the Committee Decision). Please see the annex to this Circular for additional information.

In addition, certain U.S. free trade agreements commit the United States to determine whether an international standard exists based on the principles set out in the Committee Decision. Agencies should, therefore, pay close attention to the Committee Decision and consult with USTR when questions arise as to evaluating whether a standard developed by a particular standards body is “international.” A voluntary consensus standard may be an international standard under the WTO TBT Agreement or provisions of U.S. trade agreements applying to technical barriers to trade, if it was developed in accordance with the Committee Decision principles.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which applies to sanitary and phytosanitary measures (*e.g.*, food safety regulations), also addresses the use of relevant international standards. Article 3.1 of the WTO SPS Agreement states: “To harmonize sanitary and phytosanitary measures on as wide a basis as possible, [WTO] Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist, except as otherwise provided for in this Agreement, and in particular paragraph 3.” Article 3.3 of the SPS Agreement also provides that:

Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraph 1 through 8 of Article 5. Notwithstanding the above, all measures which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provisions of this Agreement.

The WTO SPS Agreement includes a detailed definition of “sanitary or phytosanitary measure” and generally covers measures related to food safety and the spread of disease or pests. Unlike the WTO TBT Agreement, the WTO SPS Agreement identifies three bodies, among others, that develop international standards, guidelines and recommendations for purposes of implementing the WTO SPS Agreement. In particular, the SPS Agreement identifies the following as international standards, guidelines and recommendations: for food safety, those established by the Codex Alimentarius Commission; for animal health and zoonoses, those developed under the auspices of the International Office of Epizootics; for plant health, those developed in the framework of the International Plant Protection Convention; and “for matters not covered by the above organizations, appropriate standards, guidelines and recommendations promulgated by other relevant international organizations open for membership to all [WTO] Members, as identified by the [SPS] Committee.”

The United States also has procurement obligations under the WTO Agreement on Government Procurement (GPA) and a number of Free Trade Agreements (see FAR Subpart 25.4) to base the technical specifications on international standards, where available. Article X.2 of the WTO GPA provides:

In prescribing the technical specifications for the goods or services being procured, a procuring entity shall, where appropriate:

- (i) set out the technical specification in terms of performance and functional requirements, rather than design or descriptive characteristics; and
- (ii) base the technical specification on international standards, where such exist; otherwise, on national technical regulations, recognized national standards or building codes.

Agencies should consult with USTR on questions regarding international trade obligations relating to regulations, standards, conformity assessment procedures, or procurement or with respect to any requests from countries regarding the establishment of mutual arrangements with respect to standards-related activities. Pursuant to 19 U.S.C. § 2171 and 2541, USTR has statutory authorities and responsibilities in these areas including “for coordinating United States discussions and negotiations with foreign countries for the purpose of establishing mutual arrangements with respect to standards-related activities.” Agencies should consult with the Department of State on questions regarding the application of international agreements other than trade agreements.

- i. **When should my agency consider using or recognizing a standard used by a trading partner?** To the extent a standard used by a trading partner is an international standard or voluntary consensus standard, agencies should consider and use them as described in this Circular (see, *e.g.*, Sections 5a and h). In addition, agencies should consider and use a standard used by a trading partner, where, pursuant to an international agreement, the United States has agreed to do so (*e.g.*, pursuant to a mutual recognition agreement). Agencies should also examine how recognition or use of a standard used by a trading partner would impact the policy objectives set out in Section 1 of Executive Order 13609, “Promoting International Regulatory Cooperation.” An agency may have additional obligations to consider a standard used by a trading partner pursuant to Section 3(d) of Executive Order 13609.

In addition, the United States is obligated to adhere to certain international agreements with respect to accepting as equivalent standards used in the regulations of U.S. trading partners. In particular, the WTO TBT Agreement, Article 2.7, requires the United States and other WTO Members to “give positive consideration to accepting as equivalent technical regulations of other Members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfill the objectives of their own regulations.”

The WTO SPS Agreement also contains obligations regarding equivalence determinations with respect to foreign country sanitary and phytosanitary measures (SPS measures). Article 4 of the SPS Agreement provides:

- (i) Members shall accept the sanitary or phytosanitary measures of other Members as equivalent, even if these measures differ from their own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection. For this purpose, reasonable access shall be given, upon request, to the importing Member for inspection, testing and other relevant procedures.
- (ii) Members shall, upon request, enter into consultations with the aim of achieving bilateral and multilateral agreements on recognition of the equivalence of specified sanitary or phytosanitary measures. Agencies should consult with USTR regarding entering into any such consultations.

U.S. Federal law, as codified at 19 U.S.C. § 2578a, provides that an agency may not determine that a foreign country's sanitary or phytosanitary measure is equivalent to a sanitary or phytosanitary measure established under the authority of Federal law unless the agency determines the foreign country measure provides the same level of sanitary or phytosanitary protection as the U.S. measure.

See SPS Agreement, Annex A, for the definition of SPS measure.

j. How does this policy affect my agency's regulatory authorities and responsibilities?

This policy does not preempt or restrict agencies' authorities and responsibilities to make regulatory decisions authorized by statute. Such regulatory authorities and responsibilities include determining the level of acceptable risk and risk-management, and due care; setting the level of protection; and balancing risk, cost, and availability of alternative approaches in establishing regulatory requirements. However, agencies should consider using voluntary consensus standards, as described in this Circular, to achieve their regulatory, procurement, and program needs, including for test methods, sampling procedures, and protocols, if applicable.

k. How does this policy affect my agency's procurement authority? This policy does not preempt or restrict agencies' authorities and responsibilities to identify the capabilities that they need to obtain through procurements. Rather, this policy establishes a preference for using a voluntary consensus standard, to the extent a suitable one exists, instead of pursuing an identified capability through reliance on a government-unique standard.

l. What factors should my agency consider when determining whether to allow the use of more than one standard? In considering whether to allow the use of more than one standard for suppliers to demonstrate that they meet a particular program, procurement, or regulatory requirement, your agency should consider whether doing so meets your agency's regulatory, procurement, or program needs (see, *e.g.*, Section 5a). It may be appropriate for the agency to allow the use of multiple standards in order, for example, to permit greater flexibility for producers and service providers in meeting program, procurement, or regulatory requirements, enhance competition in the marketplace, provide greater choice to consumers, and enable new innovative solutions to be developed. Allowing the use of more

than one standard may also allow producers and service providers to meet both U.S. requirements and requirements in different markets simultaneously, thereby reducing burdens for manufacturers and service providers while effectively addressing agency objectives.

m. How should my agency ensure that references to standards incorporated in regulation are updated on a timely basis? Consistent with Executive Orders 13563, “Improving Regulation and Regulatory Review,” and 13610, “Identifying and Reducing Regulatory Burdens,” agencies should, on a regular basis, review and if necessary update references to standards that have been incorporated by reference. Each agency should undertake a standards-specific review of such incorporated standards every three-to-five years, or when stakeholders otherwise provide adequate information that a standards-specific review is necessary due to urgent matters of health and safety, the need to remain current with technological changes, or for other compelling reasons. For example, regulated entities may petition agencies to update incorporated standards.

In accordance with the retrospective review provisions of Executive Orders 13563 and 13610, an agency should also consult with stakeholders prior to issuance of an NPRM, for example through an Advanced Notice of Proposed Rulemaking (ANPRM) or an RFI. Such consultations will help the agency identify which updated or new standards would potentially be controversial (if incorporated by reference in regulation) and which ones would not, and also whether incorporation of new or updated standards may warrant substantive changes to the underlying regulation.

- (i) In the case of standards for which updating or substituting a new standard or standards would not be controversial, the agency should, to the extent permitted by law, consider issuing a standards-specific direct final rule.
- (ii) In the case of other standards for which an agency may wish to update or substitute a new standard or standards, the agency should publish a standards-specific NPRM.
- (iii) To promote efficiency, and to the extent feasible and appropriate, an agency is encouraged to consolidate proposals to update or substitute standards, rather than conducting separate rulemakings for each standard the agency wants to update or substitute.
- (iv) In the case of standards for which updating or substituting a new standard would require a substantial re-opening of a rule, such revisions should be addressed in the context of a broader-scope “look-back” NPRM (rather than through a standards-specific NPRM), where such re-opening meets the objectives and criteria set out in Executive Orders 13563 and 13610.
- (v) If an agency decides not to adopt the most recent version of a standard, the agency should explain its reasons in the final rule.
- (vi) Except in urgent circumstances, and where consistent with law and international obligations, agencies must allow a reasonable interval between the publication of final rules and their effective dates, in order to provide affected stakeholders sufficient time

to adapt their products and methods of production to comply with the updated or new standard.

6. What is the Policy for Federal Participation in Standards Bodies?

Consistent with Section 12(d)(2) of the NTTAA, agencies must consult with voluntary consensus standards bodies and must participate with such bodies in the development of standards when consultation and participation is in the public interest and is compatible with their missions, authorities, priorities, and budgetary resources. In voluntary consensus standards development processes, agency participation can be an important contribution to ensuring balance is achieved.

The WTO TBT and SPS Agreements also contain obligations regarding participation in international standards developing bodies:

- (i) TBT Agreement, Article 2.6: “With a view to harmonizing technical regulations on as wide a basis as possible, Members shall play a full part, within the limits of their resources, in the preparation by appropriate international standardizing bodies of international standards for products for which they either have adopted, or expect to adopt, technical regulations.”
- (ii) TBT Agreement, Article 5.5: “With a view to harmonizing conformity assessment procedures on as wide a basis as possible, Members shall play a full part, within the limits of their resources, in the preparation by appropriate international standardizing bodies of guides and recommendations for conformity assessment procedures.”
- (iii) SPS Agreement, Article 3.4: “Members shall play a full part, within the limits of their resources, in the relevant international organizations and their subsidiary bodies, in particular the Codex Alimentarius Commission, the International Office of Epizootics, and the international and regional organizations operating within the framework of the International Plant Protection Convention, to promote within these organizations the development and periodic review of standards, guidelines and recommendations with respect to all aspects of sanitary and phytosanitary measures.”

Each agency should arrange for qualified representatives to participate in standards development activities, as appropriate. The representatives’ function should be to participate in the standards writing and/or, as appropriate, act as a liaison, provide information and expertise, and communicate the views of the agency concerning the standards being developed and the procedures being followed.

- a. Must agency participants be authorized?** Agency representatives who, at Government expense, participate in activities of standards bodies on behalf of the agency must do so as specifically authorized agency representatives. Agency support for, and participation by, agency representatives in standards bodies must be in compliance with applicable laws and regulations. For example, agency support is subject to legal and budgetary authority and availability of funds. Similarly, participation by agency representatives (whether or not on behalf of the agency) in the activities of standards bodies is subject to the laws and regulations that apply to participation by Federal employees in the activities of outside organizations.

Additionally, in considering the applicability of 18 U.S.C. § 208, which addresses Federal participation in outside organizations, the Office of Legal Counsel (OLC) of the Department of Justice has determined the following: “When the board of an outside organization plays an integral role in the process of setting standards, it would therefore frustrate the statute [NTTAA] to forbid Federal employees from being on the board. They could not then take the “active” role that Congress mandated. To carry out the statute, therefore, employees may serve on these outside boards without running afoul of 18 U.S.C. § 208, if the boards are engaged in the standard-setting activities in which Congress directed Federal agencies to participate.”⁵

Furthermore, in the 2001 amendment to the NTTAA (in Section 1115 of Public Law 107-107 (which enacted a new paragraph of Section 12(d)), Congress expressly exempted application of 5 U.S.C. § 5946 (which prohibits payments for membership and conference fees) with respect to activities of Federal agencies and personnel in carrying out Section 12(d) of the NTTAA (see 15 U.S.C. § 272 note). As noted in the previous Section, active agency technical involvement and leadership in standards activities is encouraged by this Circular and the NTTAA. However, agency representatives should avoid the practice or the appearance of undue influence relating to their participation in standards bodies and activities.

b. Does agency participation indicate endorsement of any decisions reached by standards bodies? Agency participation in standards bodies does not connote agency endorsement or agreement with decisions by such bodies.

c. What forms of support may my agency provide to standards development? The forms of agency support may include:

- (i) direct financial support (*e.g.*, grants, memberships, and contracts);
- (ii) administrative support (*e.g.*, travel costs, hosting of meetings, and secretarial functions);
- (iii) technical support (*e.g.*, cooperative testing for standards evaluation and participation of agency personnel in the activities of standards bodies);
- (iv) joint planning with standards bodies to promote identification and development of needed standards; and
- (v) participation of agency personnel.

Federal agencies should give adequate priority in their budgets to the need for agency officials to participate in standards development.

d. Do agency representatives participate equally with other members? Consistent with agency regulation and policy, agency representatives should participate actively and on an equal basis with other members, consistent with the procedures of standards bodies, particularly in matters such as establishing priorities, developing procedures for preparing, reviewing and approving standards, and developing or adopting new standards. Active participation includes full involvement in discussions and technical debates, registering of opinions and, if selected,

⁵ See OLC’s opinion of August 24, 1998, on “Application of § 208 to Service by Executive Branch Employees on Boards of Standard-Setting Organizations,” <http://oge.gov/DisplayTemplates/ModelSub.aspx?id=1826>.

serving as chairpersons (or other leadership positions) or in other official capacities. Agency representatives may vote, in accordance with the procedures of the standards body, at each stage of the standards development process, unless prohibited from doing so by law or their agencies.

- e. **How should my agency alert the public of its potential participation in standards development activities that could be used as a basis for rulemaking or other mission-related activities?** In the interest of enhancing transparency and information-sharing, agencies should advise the public about ongoing or planned participation in standards development activities, when, for instance, doing so to address issues of national priority, or in support of significant regulatory action or international regulatory cooperation activities. Methods could include publication of a notice in the Federal Register, providing notice on the agency's public website, or using other appropriate mechanisms. The information provided could include, for example:

- (i) which body or organization is developing the standard;
- (ii) why the agency's participation is relevant to the public; and
- (iii) methods by which the public can obtain more information.

When an agency is unsure of the nature and extent of standards activity that may be relevant for an upcoming regulation, procurement, or non-regulatory action, the agency is encouraged to request information on standards development through, for example, an RFI or an ANPRM. Agencies could also use more informal means, such as contacting relevant bodies directly.

Note that agency participation in the standards development process is not a prerequisite for incorporating or otherwise using a standard.

- f. **What if a voluntary consensus standards body is likely to publish a suitable standard in time for an agency to use it?** If a voluntary consensus standards body is in the process of developing or adopting a voluntary consensus standard that would likely be practical for an agency to use, and would likely be developed or adopted on a timely basis, an agency should not develop its own standard and instead should participate in the activities of the voluntary consensus standards body (or at least monitor the development of the standard) so that the agency is in a position to use the standard at the appropriate time.

7. **What is the Policy on Conformity Assessment?**

Section 12(b) of the NTTAA requires the NIST to coordinate Federal, State, and local standards activities and conformity assessment activities with private sector standards development and conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures. The Secretary of Commerce, through NIST, issues guidance to the agencies on conformity assessment (see www.standards.gov).

Building upon the NTTAA, U.S. statutory and international obligations, and NIST's previous guidance to agencies on conformity assessment, agencies may develop and use conformity assessments procedures that:

- (i) are effective and appropriate in carrying out agency missions;
- (ii) minimize the regulatory and/or conformity assessment burden on regulated entities;
- (iii) are in accordance with statutory and international obligations;
- (iv) conserve and leverage agency resources; and
- (v) increase acceptance of U.S. products in domestic and foreign markets.

Agencies should be aware that conformity assessment procedures and systems can be used in many different ways to support their missions. Conformity assessment procedures and systems may be integral to a regulatory agency's compliance and enforcement system, or the results of conformity assessment may be an input to the regulatory system. The agency may have roles and responsibilities related to the development and maintenance of conformity assessment system requirements and/or the conduct of specific activities in these systems. Flexibility is essential when devising an optimal conformity assessment system tailored to the missions of regulatory agencies.

Agencies should also design conformity assessment programs with the objectives of furthering outcomes that are closely aligned with market dynamics and otherwise maximize net benefits to society. In this context, agencies should recognize the possible contribution of private sector conformity assessment activities. When properly conducted, conformity assessments conducted by private sector conformity assessment bodies can increase productivity and efficiency in government and industry, expand opportunities for international trade, conserve resources, improve health and safety, and protect the environment.

Working closely with NIST and OMB, agencies are encouraged to identify their conformity assessment needs in such areas as regulatory compliance and enforcement, procurement, and other programmatic contexts and to assess whether the use of private sector conformity assessment mechanisms in lieu of or in conjunction with government conformity assessment procedures would be beneficial, where such use is feasible and appropriate and not otherwise prohibited by law. Agencies should also consider whether reliance on international conformity assessment schemes would meet their conformity assessment needs.

Agencies will continue to have the flexibility of choosing conformity assessment programs, whether private, public, or some combination thereof, to best achieve the objectives above.

- a. What considerations should my agency make when it is addressing the need for conformity assessment?** Agencies should consider appropriate agency roles and responsibilities to carry out their missions in a way that protects health, safety, welfare, and the environment, while promoting economic growth, competitiveness, and job creation, and reducing costs and burdens, including the cumulative effects of regulation, on the affected public and the U.S. economy. When an agency is evaluating whether to put in place a conformity assessment program, it should, consistent with statute, resource constraints, and the instruments set out in Section 1 of this Circular, consider certain factors when assessing the effectiveness of conformity assessment options and determining the type(s) of conformity assessment to employ. These include:

- (i) the objective(s) of the underlying regulation, procurement, or program activity;
- (ii) the level of confidence required by the agency to ensure that the agency objective(s)

- has/have been achieved, weighing the risk of non-compliance and its associated consequences with the anticipated costs of demonstrating compliance (including time and resources) to the producers, suppliers, consumers, and the agency;
- (iii) whether there are existing private sector conformity assessment activities, acceptance schemes or arrangements, that may work in conjunction with or, where appropriate, in lieu of governmental conformity assessment activities, except where such activities are inconsistent with law, unfit for regulatory or other agency purpose, or otherwise impractical;
 - (iv) their consistency with statutory and international obligations;
 - (v) consideration of the available scientific and technical information, as relevant to the selection of the appropriate conformity assessment program;
 - (vi) relevant industry practice and experience, and the industry's history of compliance;
 - (vii) the need to reduce duplication and complexity, and ensure consistency and coordination with the conformity assessment approaches of other agencies, where feasible, appropriate, and consistent with law;⁶
 - (viii) the appropriateness of recognizing the results of private sector conformity assessment programs being utilized in State, local, and/or foreign government regulation, consistent with subsection (iii); and
 - (ix) the degree of transparency to stakeholders and the public of the conformity assessment activity.

b. Are there statutory and international obligations concerning conformity assessment?

There are statutory and international obligations governing standards-related activities, which include conformity assessment procedures. In particular, agencies should be aware of the obligations in 19 U.S.C. § 2532, which provides that “[n]o Federal agency may engage in any standards-related activity that creates unnecessary obstacles to the foreign commerce of the United States...” and that “[e]ach Federal agency shall ensure, in applying standards-related activities with respect to any imported product, that such product is treated no less favorably than are like domestic or imported products...” Additionally, “[e]ach Federal agency shall, with respect to any conformity assessment procedure used by it, permit access for obtaining an assessment of conformity and the mark of the system, if any, to foreign suppliers of a product on the same basis as access is permitted to suppliers of like products, whether of domestic or other foreign origin.” 19 U.S.C. § 2532(4). Conformity assessment requirements and procedures are also subject to the WTO TBT Agreement, which requires the United States to ensure it does not prepare, adopt, or apply conformity assessment procedures with a view to, or with the effect of, creating unnecessary obstacles to international trade. Articles 5 through 9 of the WTO TBT Agreement set out detailed obligations on conformity assessment procedures falling within the scope of the WTO TBT Agreement, including the need to use relevant guides or recommendations issued by international standardizing bodies as a basis for conformity assessment procedures, except where ineffective or inappropriate, and to ensure that the conformity assessment procedures are not more strict or applied more strictly than necessary to give adequate assurance that products conform to applicable “technical regulations” or

⁶ Pursuant to 15 C.F.R. § 287.1, your agency should work with NIST to “coordinate conformity assessment activities with those of other appropriate government agencies and with those of the private sector to reduce unnecessary duplication....This will help ensure more productive use of the increasingly limited Federal resources available to conduct conformity assessment activities...” Consistent with 15 C.F.R. § 287.4, agencies should also “consider using the results of other agencies’ conformity assessment procedures (see also Section 7e).”

standards, taking into account the risks non-conformity would create. Article 9.1 of the WTO TBT Agreement provides:

Where a positive assurance of conformity with a technical regulation or standard is required, Members shall, whenever practical, formulate and adopt international systems for conformity assessment and become members thereof or participate therein.

The United States has also undertaken additional commitments on conformity assessment in U.S. free trade agreements (FTA). These include a commitment not to discriminate against conformity assessment bodies located in the territories of U.S. FTA partners when it comes to accrediting, approving, licensing or otherwise recognizing conformity assessment bodies. Agencies are urged to consult with USTR on questions regarding international obligations regarding conformity assessment.

- c. **What obligations does my agency have when considering whether to use a conformity assessment procedure used by a trading partner?** Agencies should use voluntary consensus standards and international guides and recommendations issued by international standardizing bodies in their conformity assessment procedures, as described in this Circular, including where such standards, guides and recommendations are used by a trading partner. In addition, Article 6.1 of the WTO TBT Agreement obligates the United States (and other WTO members) to accept the results of conformity assessment procedures in other WTO member countries, provided it is satisfied that those procedures offer an assurance of conformity equivalent to its own procedures. U.S. free trade agreements may also have obligations with respect to recognition of trading partners' conformity assessment procedures. Agencies should consult with USTR regarding compliance with these obligations. Agencies should consult with the Department of State in the case of other international obligations or to consider what other relevant international agreements may apply. Agencies should also examine how such use or recognition would impact the policy objectives set out in Executive Order 13609, "Promoting International Regulatory Cooperation." An agency may have additional obligations to consider such procedures under Section 3(d) of Executive Order 13609.
- d. **How does this policy affect my agency's regulatory authorities and responsibilities?** This policy does not preempt or restrict agencies' authorities and responsibilities to make regulatory decisions authorized by statute.
- e. **When should my agency utilize the retrospective review mechanism with respect to conformity assessment?** Pursuant to Executive Orders 13563, "Improving Regulation and Regulatory Review," and 13610, "Identifying and Reducing Regulatory Burdens," and 15 C.F.R. § § 287.1 and 287.4, your agency should integrate meaningful review of its conformity assessment activities into its retrospective review plans on a periodic basis. Consistent with the NTTAA, this Circular (particularly Section 1), and NIST guidance, the review should evaluate alternative approaches to ensure that current conformity assessment schemes are effective and the burden on regulated entities is minimized.

Agencies are encouraged to consider joint rulemaking to reduce redundancy, complexity, and the cumulative effects on the regulated public of needing to comply with different conformity assessment procedures where (1) agencies have the same or similar requirements for

conformity assessment for the same product/service attributes and (2) demonstrating compliance with one agency's requirement is sufficient to demonstrate that a product or service attribute conforms to other agencies' requirements for the same product or service attribute. Consistent with law and the need for agencies to maintain appropriate levels of protection, for example, in regulations affecting health, safety, and the environment, agencies should engage the regulated public and other stakeholders in public consultation as part of the retrospective review process described above before initiating such rulemakings.

8. How will the U.S. Government Coordinate Regulatory Policy with Standards and Conformity Assessment Policy?

The Interagency Committee on Standards Policy (ICSP) shall coordinate with the Trade Policy Staff Committee (TPSC), its subcommittee on Technical Barriers to Trade, and the designees, or "Seconds," of the Regulatory Working Group (Working Group) created by Executive Order 12866, "Regulatory Planning and Review," with a view to encouraging more strategic and coordinated Federal participation in the development and use of standards and in conformity assessment activities, in accordance with the objectives of the executive orders set out in Section 1 of this Circular. USTR has responsibility under 19 U.S.C. §§ 2171 and 2541 for coordinating the consideration of international trade policy issues with respect to standards-related activities.

While a primary focus of this Circular is to encourage agency reliance on voluntary consensus standards, OMB recognizes Federal agencies also participate in the development of other standards with standards bodies that do not have all of the attributes described in Section 2(e), as well as in regulatory collaboration initiatives and encourages such participation. Under Section 2(a) of Executive Order 13609, "Promoting International Regulatory Cooperation," and subject to Section 6 of that order, the Working Group serves "as a forum to discuss, coordinate, and develop a common understanding among agencies of U.S. Government positions and priorities with respect to: (A) international regulatory cooperation activities that are reasonably anticipated to lead to significant regulatory actions; . . ." Moreover, under Section 3(a) of Executive Order 13609, "if required to submit a Regulatory Plan pursuant to Executive Order 12866, [each agency shall] include in that plan a summary of its international regulatory cooperation activities that are reasonably anticipated to lead to significant regulations, with an explanation of how these activities advance the purposes of Executive Order 13563 and [Executive Order 13609]." Regular discussions between the Working Group Seconds and the ICSP, as well as the TPSC, its subcommittee on Technical Barriers to Trade, and any other relevant interagency groups or committees, will help to coordinate U.S. Government activities relating to standards and conformity assessment, as well as regulation.

MANAGEMENT AND REPORTING OF STANDARDS USE

9. How Does My Agency Manage and Report on the Implementation of the Circular?

Your agency should establish a process to identify, manage, and review your agency's activities pursuant to the guidance in this Circular. At minimum, your agency must have the ability to provide to OMB, through NIST, (1) a report on the agency's use of government-unique standards in lieu of voluntary consensus standards, along with an explanation of the reasons for such

usage, as required by Section 12(d) of the NTTAA and as described in Section 5c of this Circular; and (2) a summary of your agency's activities undertaken to carry out the provisions of this Circular. The summary should contain a link to the agency's standards-specific website(s) where this information is available. This policy establishes two ways – category based reporting and transaction based reporting – for agencies to manage and report their use of standards. Your agency must report uses of government-unique standards in lieu of voluntary consensus standards in one or both ways, pursuant to the following guidance.

As required by the NTTAA, your agency must report to NIST, no later than December 31 of each year, the decisions by your agency in the previous fiscal year to use government-unique standards in lieu of voluntary consensus standards. Your agency must include an explanation of the reason(s) why use of such voluntary consensus standards would be inconsistent with applicable law or otherwise impractical, as described in Sections 5c, 10a(ii), and 11b(ii) of this Circular. Your agency must report in accordance with the instructions issued by NIST.

NIST must maintain the reports received on <http://www.nist.gov/standardsgov/> and will report the use of government-unique standards in lieu of voluntary consensus standards, along with the agency's explanations for such use, to OMB on an annual basis.

10. What are the Procedures for Reporting My Agency's Use of Standards in Regulations?

Your agency should use transaction based reporting – that is, report on each use of a government-unique standard in lieu of a voluntary consensus standard – in your annual report to NIST if your agency issues regulations that use or reference standards. If your agency is issuing or revising a regulation that contains a standard, your agency should follow these procedures:

- a. Publish in the preamble of rulemaking notices what steps the agency is taking to follow and implement the Circular. Such information should include the following elements if applicable:
 - (i) When your agency is proposing or has decided to use a standard, provide a statement which identifies such standard and any alternative standards which have been identified.
 - (ii) When your agency is proposing or has decided to use a government-unique standard in lieu of a voluntary consensus standard, provide a statement that identifies such standards and provide an explanation for why using the voluntary consensus standard would be inconsistent with law or otherwise impractical. Such explanation must be also included in the annual report.
 - (iii) When your agency is proposing or has decided to use a government-unique standard and has not identified a voluntary consensus standard, your agency should include a statement to that effect in the preamble of the final rule or guidance document. For other rulemaking notices, your agency should invite the public to identify any standard and explain why your agency should use such a standard.
- b. For significant regulatory actions, agencies are also encouraged to include in their rulemaking notices a discussion in the regulatory preamble of the following elements:

- (i) which bodies or organizations the agency consulted with to determine whether there are relevant standards in use in the marketplace (or completion of relevant standards is imminent) or if standards that are currently incorporated by reference have been revised;
- (ii) whether agency officials are participating in the work of such bodies or organizations, along with a description of their roles;
- (iii) whether the agency has worked with relevant bodies or organizations to try to ensure that the standards meet agency needs, and a description of the agency's interactions with the technical committees and/or technical advisory groups involved; and
- (iv) whether the agency has coordinated its positions in technical advisory groups or technical committees of such bodies or organizations with (1) other interested agencies that are or should be participating in such work and, (2) where appropriate, foreign regulatory agencies that are participating in such work, where the work is relevant to regulatory cooperation council work plans described in Section 3(d) of Executive Order 13609, "Promoting International Regulatory Cooperation."

11. What are the Procedures for Reporting My Agency's Use of Standards in Procurements?

Your agency must report on either a categorical basis or on a transaction basis to identify, manage, and review the standards used in your agency's procurements.

- a. How does my agency report the use of standards in procurements on a categorical basis?** Your agency must use categorical based reporting when your agency identifies, manages, and reviews the use of standards by group or category. Category based reporting is especially useful when your agency either conducts large procurements or large numbers of procurements using government-unique standards, or is involved in long-term procurement contracts that require replacement parts based on government-unique standards. To report use of government-unique standards on a categorical basis, your agency must:
 - (i) maintain a centralized standards management system that identifies how your agency uses government-unique, voluntary consensus, and other standards;
 - (ii) systematically review your agency's use of government-unique standards for conversion to voluntary consensus standards and, where appropriate, other standards;
 - (iii) maintain records on the groups or categories for which your agency uses government-unique standards in lieu of voluntary consensus standards, including an explanation of the reasons for such use, which must be transmitted according to Sections 5c and 9; and
 - (iv) enable potential offerors to suggest voluntary consensus standards and, where appropriate, other standards that can replace government-unique standards.
- b. How does my agency report the use of standards in procurements on a transaction basis?** Your agency should report on a transaction basis when your agency identifies, manages, and reviews the use of standards on a transaction basis rather than a category basis. Transaction-based reporting is especially useful when your agency conducts procurement involving mostly commercial products and services, but is occasionally

involved in a procurement involving government-unique standards. To report use of government-unique standards on a transaction basis, your agency must follow the following procedures:

- (i) in each solicitation that references government-unique standards, the solicitation must identify such standards and provide potential offerors an opportunity to suggest alternative voluntary consensus standards (or, where appropriate, other standards) that meet the agency's requirements; and
- (ii) if such suggestions are made and the agency decides to use government-unique standards in lieu of voluntary consensus standards, the agency must explain in its annual report to OMB through NIST, as described in Sections 5c and 9, why using such voluntary consensus standards is inconsistent with applicable law or otherwise impractical.

The requirements in this Section do not apply to those solicitations that are for: (1) commercial-off-the-shelf products (COTS), (2) products or services that rely on voluntary consensus standards or other standards, or (3) products that otherwise do not rely on government-unique standards.

AGENCY RESPONSIBILITIES

12. What are the Responsibilities of the Secretary of Commerce?

The Secretary of Commerce:

- a. coordinates and fosters executive branch implementation of this Circular and, as appropriate, provides administrative guidance to assist agencies in implementing this Circular, including guidance on identifying voluntary consensus standards bodies and voluntary consensus standards;
- b. sponsors and supports the ICSP, chaired by NIST, which considers agency views and advises the Secretary and agency heads on the Circular;
- c. reports to the Director of OMB concerning the implementation of the policy provisions of this Circular; and
- d. issues guidance to the agencies to improve coordination on conformity assessment in accordance with Section 7 of this Circular.

13. What are the Responsibilities of the Heads of Agencies?

The Heads of Agencies:

- a. implement the policies of this Circular in accordance with the procedures described;
- b. ensure agency compliance with the policies of the Circular is a top priority and implement appropriate organizational changes as necessary to achieve such compliance;
- c. in the case of an agency that uses standards for regulatory, procurement, or other mission-related activities, designate a senior level official as the Agency Standards Executive who

- will be responsible for the agency's implementation of this Circular, including the responsibilities outlined in 15 C.F.R. 287.5; represent the agency on the ICSP; and be situated in the agency's organizational structure such that he or she is kept regularly apprised of the agency's regulatory, procurement, and other mission-related activities and has sufficient authority within the agency to ensure compliance with the Circular; and
- d. transmit the annual report prepared by the Agency Standards Executive as described in Section 9 of this Circular.

14. What are the Qualifications and Responsibilities of Agency Standards Executives?

An Agency Standards Executive, consistent with applicable law:

- a. Should be a senior level official; have demonstrated knowledge of, and experience in, the areas of standards, standardization processes and procedures, and conformity assessment; be broadly engaged in the agency's standards and conformity assessment related activities so as to ensure intra-agency coordination; and be broadly familiar with how the agency uses standards and conformity assessment in its mission and how it participates in activities of standards bodies and conformity assessment systems, including international systems of conformity assessment.
- b. Promotes the following goals in the context of agency participation in the work of standards bodies and in conformity assessment activities:
- (i) effective use of agency resources and participation in standards bodies;
 - (ii) the development of agency positions that are in the public interest and are coordinated across units;
 - (iii) the development of agency positions that are consistent with Administration policy;
 - (iv) the development of agency technical and policy positions that are clearly defined and coordinated with other Federal participants in a given standards activity; and
 - (v) the development of agency policies on conformity assessment to implement the provisions of Section 7 of this Circular, consistent with 15 C.F.R. § 287.
- c. Coordinates the agency's participation in standards bodies by:
- (i) establishing procedures to ensure that agency representatives who participate in standards bodies will, to the extent possible, ascertain the views of the agency on matters of paramount interest and express views and positions that are not inconsistent or in conflict with established agency views and positions;
 - (ii) consulting other relevant agencies, as appropriate, to avoid to the extent practicable expressing views or positions in standards bodies that are inconsistent or in conflict with established views or positions of such other agencies;
 - (iii) ensuring that the agency's participation in standards bodies is consistent with agency missions, authorities, priorities, and budget resources;
 - (iv) coordinating with standards bodies, and notifying such bodies when the agency has incorporated their standards by reference in regulation;
 - (v) ensuring, when two or more agencies participate in a given standards activity, that they coordinate their views on matters of paramount importance so as to present, whenever

- feasible, a single, unified position and, where not feasible, a mutual recognition of differences;
- (vi) cooperating with the head of the agency or his or her designee in carrying out his or her responsibilities under this Circular;
 - (vii) consulting with the head of the agency or his or her designee, as necessary, in the development and issuance of internal agency procedures and guidance implementing this Circular;
 - (viii) preparing, as described in Sections 9 through 11 of this Circular, a report on uses of government-unique standards in lieu of voluntary consensus standards, and a report on the status of agency standards policy activities;
 - (ix) establishing a process for ongoing review of the agency's use of standards for purposes of updating or substituting, pursuant to Section 5m;
 - (x) coordinating with appropriate agency offices (*e.g.*, budget and legal offices) to ensure that effective processes exist for the review of proposed agency support for, and participation in, standards bodies, so that agency support and participation will comply with applicable laws and regulations;
 - (xi) making agency employees aware of available standards training opportunities and providing training (consistent with an agency's budgetary and other considerations) for agency employees participating in standards and conformity assessment activities so that participation is effective, efficient, and in keeping with the rules of the organizations in which they are participating;
 - (xii) providing ongoing assistance and policy guidance to agency employees and managers on significant issues in standardization and conformity assessment; and
 - (xiii) coordinating with the TPSC TBT Subcommittee or other relevant TPSC subcommittees on the trade implications of standardization.
- d. Ensures that agency rulemaking, procurement, and other programmatic activities are consistent with this Circular by, for example:
- (i) providing ongoing assistance, training, and policy guidance to agency employees and managers on the Circular;
 - (ii) being engaged in the development of the agency's rulemakings, procurements, and other programmatic activities that have a standards and/or conformity assessment component and providing advice on compliance with the Circular; and
 - (iii) participating in the ICSP and consulting on a regular basis with NIST, other Agency Standards Executives, USTR (and, if applicable, your agency's representatives to the relevant subcommittee of the TPSC), and the desk officer for your agency in OMB's OIRA.

SUPPLEMENTARY INFORMATION

15. When Will This Circular Be Reviewed?

This Circular will be reviewed for effectiveness no later than five years from the date of issuance.

16. What Is the Legal Effect of This Circular?

This Circular is not intended to delay the administrative process, and this Circular does not provide new grounds for judicial review, or create new rights or benefits, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, or its officers or employees. Authority for this Circular is based on 31 U.S.C. § 1111, which gives OMB broad authority to establish policies for the improved management of the Executive Branch. This Circular is intended to implement section 12(d) of the NTTAA (15 U.S.C. § 272 note) and other instruments set out in Section 1 of the Circular; establish policies that will improve the internal management of the Executive Branch; and, in so doing, improve regulatory and other policy outcomes.

17. Do You Have Further Questions?

For information concerning this Circular, contact the Office of Management and Budget, Office of Information and Regulatory Affairs at CircularA-119@omb.eop.gov.

ANNEX A

Decision Of The Committee On Principles For The Development Of International Standards, Guides And Recommendations With Relation To Articles 2, 5 And Annex 3 Of The Agreement

Decision⁷

The following principles and procedures should be observed, when international standards, guides and recommendations (as mentioned under Articles 2, 5 and Annex 3 of the TBT Agreement for the preparation of mandatory technical regulations, conformity assessment procedures and voluntary standards) are elaborated, to ensure transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and to address the concerns of developing countries.

The same principles should also be observed when technical work or a part of the international standard development is delegated under agreements or contracts by international standardizing bodies to other relevant organizations, including regional bodies.

Transparency

All essential information regarding current work programmes, as well as on proposals for standards, guides and recommendations under consideration and on the final results should be made easily accessible to at least all interested parties in the territories of at least all WTO Members. Procedures should be established so that adequate time and opportunities are provided for written comments. The information on these procedures should be effectively disseminated.

In providing the essential information, the transparency procedures should, at a minimum, include:

- (a) The publication of a notice at an early appropriate stage, in such a manner as to enable interested parties to become acquainted with it, that the international standardizing body proposes to develop a particular standard;
- (b) The notification or other communication through established mechanisms to members of the international standardizing body, providing a brief description of the scope of the draft standard, including its objective and rationale. Such communications shall take place at an early appropriate stage, when amendments can still be introduced and comments taken into account;
- (c) Upon request, the prompt provision to members of the international standardizing body of the text of the draft standard;
- (d) The provision of an adequate period of time for interested parties in the territory of at least all members of the international standardizing body to make comments in writing

⁷ G/TBT/9, 13 November 2000, para. 20 and Annex 4.

and take these written comments into account in the further consideration of the standard;

- (e) The prompt publication of a standard upon adoption; and
- (f) To publish periodically a work programme containing information on the standards currently being prepared and adopted.

It is recognized that the publication and communication of notices, notifications, draft standards, comments, adopted standards or work programmes electronically, via the Internet, where feasible, can provide a useful means of ensuring the timely provision of information. At the same time, it is also recognized that the requisite technical means may not be available in some cases, particularly with regard to developing countries. Accordingly, it is important that procedures are in place to enable hard copies of such documents to be made available upon request.

Openness

Membership of an international standardizing body should be open on a non- discriminatory basis to relevant bodies of at least all WTO Members. This would include openness without discrimination with respect to the participation at the policy development level and at every stage of standards development, such as the:

- (a) Proposal and acceptance of new work items;
- (b) Technical discussion on proposals;
- (c) Submission of comments on drafts in order that they can be taken into account;
- (d) Reviewing existing standards;
- (e) Voting and adoption of standards; and
- (f) Dissemination of the adopted standards.

Any interested member of the international standardizing body, including especially developing country Members, with an interest in a specific standardization activity should be provided with meaningful opportunities to participate at all stages of standard development. It is noted that with respect to standardizing bodies within the territory of a WTO Member that have accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards by Standardizing Bodies (Annex 3 of the TBT Agreement) participation in a particular international standardization activity takes place, wherever possible, through one delegation representing all standardizing bodies in the territory that have adopted, or expected to adopt, standards for the subject-matter to which the international standardization activity relates. This is illustrative of the importance of participation in the international standardizing process accommodating all relevant interests.

Impartiality and Consensus

All relevant bodies of WTO Members should be provided with meaningful opportunities to contribute to the elaboration of an international standard so that the standard development process will not give privilege to, or favour the interests of, a particular supplier/s, country/ies or region/s. Consensus procedures should be established that seek to take into account the views of all parties concerned and to reconcile any conflicting arguments.

Impartiality should be accorded throughout all the standards development process with respect to, among other things:

- (a) Access to participation in work;
- (b) Submission of comments on drafts;
- (c) Consideration of views expressed and comments made;
- (d) Decision-making through consensus;
- (e) Obtaining of information and documents;
- (f) Dissemination of the international standard;
- (g) Fees charged for documents;
- (h) Right to transpose the international standard into a regional or national standard; and
- (i) Revision of the international standard.

Effectiveness and Relevance

In order to serve the interests of the WTO membership in facilitating international trade and preventing unnecessary trade barriers, international standards need to be relevant and to effectively respond to regulatory and market needs, as well as scientific and technological developments in various countries. They should not distort the global market, have adverse effects on fair competition, or stifle innovation and technological development. In addition, they should not give preference to the characteristics or requirements of specific countries or regions when different needs or interests exist in other countries or regions. Whenever possible, international standards should be performance based rather than based on design or descriptive characteristics.

Accordingly, it is important that international standardizing bodies:

- (a) Take account of relevant regulatory or market needs, as feasible and appropriate, as well as scientific and technological developments in the elaboration of standards;
- (b) Put in place procedures aimed at identifying and reviewing standards that have become obsolete, inappropriate or ineffective for various reasons; and
- (c) Put in place procedures aimed at improving communication with the World Trade

Organization.

Coherence

In order to avoid the development of conflicting international standards, it is important that international standardizing bodies avoid duplication of, or overlap with, the work of other international standardizing bodies. In this respect, cooperation and coordination with other relevant international bodies is essential.

Development Dimension

Constraints on developing countries, in particular, to effectively participate in standards development, should be taken into consideration in the standards development process. Tangible ways of facilitating developing countries' participation in international standards development should be sought. The impartiality and openness of any international standardization process requires that developing countries are not excluded de facto from the process. With respect to improving participation by developing countries, it may be appropriate to use technical assistance, in line with Article 11 of the TBT Agreement. Provisions for capacity building and technical assistance within international standardizing bodies are important in this context.

Defendant.

JA2051

(D.C. Cir. 2001) (quoting *Daubert*, 509 U.S. at 592). Trial courts “act as gatekeepers who may only admit expert testimony if it is both relevant and reliable,” *Heller v. D.C.*, 952 F. Supp. 2d 133, 139 (D.D.C. 2013), though this role is “significantly diminished” at the summary judgment stage, see *Window Specialists, Inc. v. Forney Enters., Inc.*, 47 F. Supp. 3d 53, 60 (D.D.C. 2014).

In determining whether to strike an expert report, the court’s focus is on whether the expert’s assumptions “amount to ‘rampant speculation’ and should be excluded” or “merely represent a weak factual basis for his testimony” which could be appropriately challenged on cross examination at trial. *Boyar v. Korean Air Lines Co., Ltd.*, 954 F. Supp. 4, 7 (D.D.C. 1996). As the Court in *Daubert* instructed, “vigorous cross examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” 509 U.S. at 596.

Defendant argues that the scope of the Jarosz Report exceeds his expertise and that Jarosz improperly relied on factual information from Plaintiffs themselves, thus acting “as a mouthpiece.” (Def. Mem. at 6–7). Based on Jarosz’s education, publications, and participation as an expert in intellectual property infringement in hundreds of other cases, the court finds his expertise to be well established. While Defendant argues that Jarosz lacks both experience evaluating standards development organizations and independent knowledge of the development of those organizations’ standards and the process of incorporation by reference, the court concludes that such specialized personal knowledge is not required for an expert to be qualified to opine on the economic impact of copyright infringement. Additionally, based on the extensive number of deposition transcripts, documents, websites, publications, and data reviewed by Jarosz, his opinions are sufficiently supported.

Defendant also argues that Jarosz made improper assumptions and failed to apply reliable

methodologies to the facts. Specifically, Defendant takes issue with Jarosz’s analysis involving the impact on revenue from the loss of copyright protection, the differences in harms relating to the standards in this case versus all of Plaintiffs’ standards generally, the potential impact that Plaintiffs’ reading rooms have on revenue, and the estimation of lost sales. Ultimately, Defendant appears to argue simply that different analyses would have resulted in an expert report more favorable to Defendant’s position. Defendant could have offered a rebuttal expert in response (and was in fact given time to do so by Magistrate Judge Robinson during discovery), but chose not to. However, the court will not strike an expert report simply because the expert did not rely on the particular assumptions or data Defendant thought was necessary. Those issues are more properly addressed through “vigorous cross-examination [and] presentation of contrary evidence.” *Daubert*, 509 U.S. at 596.

Plaintiffs have sufficiently established that Jarosz has the experience and education necessary to be qualified as an expert in this case, and that the content of his testimony—applying general economic principles to the effects of copyright infringement of Plaintiffs’ standards—may “help the trier of fact.” *See* Fed. R. Evid. 702; *Daubert*, 509 U.S. at 588. Therefore, at this stage, the court will not take the unusual step of striking his report from consideration.

Date: September 21, 2016

Tanya S. Chutkan
TANYA S. CHUTKAN
United States District Judge

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR	.	
TESTING AND MATERIALS,	.	
et al.,	.	CA No. 13-1215 (TSC)
	.	
Plaintiffs,	.	
	.	
v.	.	
	.	
PUBLIC.RESOURCE.ORG, INC.,	.	
	.	
Defendant.	.	
.	
AMERICAN EDUCATIONAL	.	CA No. 14-0857 (TSC)
RESEARCH ASSOCIATION, INC.,	.	
et al.,	.	
	.	
Plaintiffs,	.	
	.	
v.	.	
	.	
PUBLIC.RESOURCE.ORG, INC.,	.	Washington, D.C.
	.	Monday, September 12, 2016
Defendant.	.	9:12 a.m.
.	

TRANSCRIPT OF MOTIONS HEARING
BEFORE THE HONORABLE TANYA S. CHUTKAN
UNITED STATES DISTRICT JUDGE

APPEARANCES:

For Plaintiff ASTM:	J. KEVIN FEE, ESQ. JORDANA S. RUBEL, ESQ. Morgan, Lewis & Bockius, LLP 1111 Pennsylvania Avenue, NW Washington, D.C. 20004 (202) 739-3000
For Plaintiff NFPA:	KELLY KLAUS, ESQ. ROSE L. EHLER, ESQ. Munger, Tolles & Olson, LLP 560 Mission Street, 27th Floor San Francisco, California 94105 (415) 512-4000

1 I mean, it is not valid unless an instrument of conveyance or a
2 note or memorandum of the transfer is in writing and signed by
3 the owner of the rights conveyed or such owner's duly authorized
4 agent. And the cases are clear that when you say on these
5 membership forms, oh, I agree that anything I do will belong to
6 you, that's not an assignment. So that's the ASTM problem.
7 It's a severe problem.

8 Then we get to NFPA, and I will admit that the most recent
9 NFPA standard is better. Okay? It is absolutely better.
10 That's why they amended the complaint to add it to the lawsuit,
11 because it may be the only document at issue in this case where
12 there looks like pretty good ownership. But even there, there's
13 a problem, Your Honor, and this gets a little technical.

14 Now that they claim that everything is joint works from
15 joint owners, what about the fact that some of these joint
16 owners are the U.S. government? That U.S. government employees
17 participate as joint authors?

18 No case has ever dealt with this, Your Honor, and I don't
19 know how to deal with it. But § 105 of the Copyright Act says
20 that U.S. government works are not subject to copyright, and
21 Mr. Klaus explained that those are, where they're prepared by an
22 employee acting in the scope of employment. Now they're saying
23 they've got joint works with a whole bunch of federal employees
24 as joint authors.

25 So this is just a mess. Your Honor, yes. It is a dog's

1 THE COURT: Thank you.

2 MR. BRIDGES: Thank you, Your Honor. This is
3 Andrew Bridges again for Public.Resource.

4 THE COURT: Mr. Bridges, if the defendant's sole
5 purpose is to disseminate the law, as you say, why do you need
6 to disseminate the plaintiffs' logos?

7 MR. BRIDGES: We don't have to, Your Honor, except
8 that what we've done is, in the spirit of what we understand the
9 incorporation is to be, which is incorporation of particular
10 documents, Public.Resource has replicated the entire document.
11 As is. Now, we need --

12 THE COURT: Well, then you add this certificate; right?

13 MR. BRIDGES: That's right, which emphatically
14 makes the point that it is the law. It doesn't say this is
15 Public.Resource's. We need to be clear. The allegations that
16 Public.Resource is trying to confuse the public about source
17 sponsorship or affiliation of these standards is pretextual and
18 ironic. The fact is, they would sue Public.Resource no matter
19 what. If Public.Resource dropped the logos, they would sue for
20 reverse passing-off, but because it maintained the logos,
21 they're suing for trademark infringement.

22 Let me be clear. Public.Resource would take direction from
23 this Court. Logos: yes or no? It doesn't care. It simply
24 tried to replicate the law which consists of these documents
25 incorporated by reference.

1 Disclaimer. First of all, the Supreme Court in two cases
2 has approved disclaimers. If Public.Resource needs to say --
3 first of all, I'm not sure that the plaintiffs would want their
4 logos taken off because they use their monopoly position to try
5 to make money by associating these standards that have become
6 law with themselves. But if they want the logos off, we will
7 get the logos off, Your Honor. That's not a sticking point.
8 We're just trying to make clear that these are the laws that are
9 in the CFR or state law or whatever. If the Court wants a
10 disclaimer --

11 THE COURT: Well, with regard to disclaimer, if you
12 point to your disclaimers as sufficient to notify consumers that
13 the standards aren't originals, that they're reproductions, I
14 look at the language on the cover page, and it's hard to
15 understand how this -- is this Exhibit 16? -- how this resolves
16 any confusion.

17 MR. BRIDGES: Your Honor, it's not just about this.
18 It's about the entire experience that somebody has going to
19 Public.Resource's website. When I go to the Cornell website, I
20 don't think I'm going to the Library of Congress to get a law.
21 I know I'm going someplace where I can get the law. I've got no
22 confusion between the National Archives and Cornell, but I know
23 that I can go to Cornell to get the law. There is no likelihood
24 of confusion that somebody thinks Public.Resource wrote these.

25 THE COURT: Then why do you have a disclaimer?

1 MR. BRIDGES: We have this document that says this is
2 the law. We have -- and I'm not -- there are different
3 disclaimers at different times, so I'm not clear on exactly what
4 they've all been.

5 THE COURT: Why do you even need this?

6 MR. BRIDGES: We need this to make a political point
7 that this is the law, and we want people to understand that this
8 is no longer just somebody's private standard. This is the law,
9 and that's exactly what it says here. It's giving the citation
10 to the U.S. Code that makes it the law.

11 THE COURT: If all you want to do is to make sure that
12 consumers realize that it is the law, why do you need their logo?

13 MR. BRIDGES: I'm saying, Your Honor, we would drop
14 the logo in a second if that's the Court's direction. The
15 reason we included the logo -- we don't have to have a fight
16 over them with this.

17 THE COURT: Well, they brought a claim.

18 MR. BRIDGES: That's right. They brought a claim, and
19 they would have brought a claim no matter what we did, because
20 it's really a copyright issue.

21 THE COURT: The Court is unconcerned with their
22 motivations for bringing a claim. My only concern is whether
23 they have a valid claim.

24 MR. BRIDGES: Your Honor, if the motivation is to
25 enforce a copyright right, then it's squarely in the middle of

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

AMERICAN SOCIETY FOR TESTING
AND MATERIALS, *et al.*,

Plaintiffs,

V.

PUBLIC.RESOURCE.ORG, INC.,

Defendant.

AMERICAN EDUCATIONAL
RESEARCH ASSOCIATION, INC. *et al.*,

Plaintiffs,

V.

PUBLIC.RESOURCE.ORG, INC.,

Defendant.

Case No. 13-cv-1215 (TSC)

Case No. 14-cv-0857 (TSC)

MEMORANDUM OPINION

Before the court are motions and cross-motions for summary judgment in two related cases. Because there is significant factual and legal overlap between the two cases, the court issues this consolidated opinion to be filed in both cases.

Plaintiffs American Society for Testing and Materials (“ASTM”), National Fire Protection Association, Inc. (“NFPA”), and American Society of Heating, Refrigerating, and Air-Conditioning Engineers (“ASHRAE”) (collectively “ASTM Plaintiffs”) brought suit against Defendant Public.Resource.org, Inc. (“Public Resource”) under the Copyright Act (17 U.S.C. § 101 *et seq.*) and the Lanham Act (15 U.S.C. § 1051 *et seq.*), alleging copyright infringement and trademark infringement. Plaintiffs American Educational Research Association, Inc.

(“AERA”), American Psychological Association, Inc. (“APA”), and National Council on Measurement in Education, Inc. (“NCME”) (collectively “AERA Plaintiffs”) also brought copyright infringement claims against Public Resource under the Copyright Act. Plaintiffs¹ in both cases seek permanent injunctions barring Defendant from continued display of their works.

Plaintiffs moved for summary judgment, and Defendant filed cross-motions for summary judgment in both cases. The court held a combined oral argument on September 12, 2016 to consider the motions. Upon consideration of the parties’ filings, the numerous amicus briefs, and the arguments presented at the motions hearing, and for the reasons stated herein, the ASTM Plaintiffs’ motion for summary judgment is GRANTED and Defendant’s cross-motion is DENIED. The AERA Plaintiffs’ motion for summary judgment is GRANTED IN PART AND DENIED IN PART, and Defendant’s cross-motion is DENIED.

I. FACTUAL BACKGROUND

A. The Parties

1. ASTM Plaintiffs

ASTM Plaintiffs are not-for-profit organizations that develop private sector codes and standards in order to advance public safety, ensure compatibility across products and services, facilitate training, and spur innovation. (*See* ASTM Pls. Statement of Material Facts (“PSMF”) ¶¶ 9, 13, 14, 86, 87, 129, 130 (ASTM ECF No. 118-2)).² These standards include technical works, product specifications, installation methods, methods for manufacturing or testing materials, safety practices, and other best practices or guidelines. (*Id.* ¶ 1). ASTM has

¹ For simplicity, the court’s use of “Plaintiffs” refers collectively to the ASTM Plaintiffs and AERA Plaintiffs.

² All initial citations to the record in this Opinion will include the docket number as “ASTM ECF” or “AERA ECF.”

developed over 12,000 standards that are used in a wide range of fields, including consumer products, iron and steel products, rubber, paints, plastics, textiles, medical services and devices, electronics, construction, energy, water, and petroleum products, and are the combined efforts of over 23,000 technical members, representing producers, users, consumers, government, and academia. (*Id.* ¶¶ 13, 28, 41). NFPA has developed over 300 standards in the areas of fire, electrical, and building safety, with the goal of reducing the risk of death, injury, and property and economic loss due to fire, electrical, and related hazards. (*Id.* ¶¶ 86, 87, 92). NFPA's most well-known standard is the National Electrical Code, first published in 1897 and most recently in 2014. (*Id.* ¶¶ 93–94). Finally, ASHRAE has published over 100 standards for a variety of construction-related fields, including energy efficiency, indoor air quality, refrigeration, and sustainability. (*Id.* ¶ 130).

2. AERA Plaintiffs

AERA Plaintiffs are not-for-profit organizations that collaboratively develop the Standards for Educational and Psychological Testing, including the 1999 edition at issue in this case (“the 1999 Standards”). (AERA PSMF ¶¶ 1, 5, 13 (AERA ECF No. 60-2)). AERA is a national scientific society whose mission is “to advance knowledge about education, to encourage scholarly inquiry related to education, and to promote the use of research to improve education.” (*Id.* ¶ 2). APA is the world's largest association of psychologists, and its mission is “to advance the creation, communication, and application of psychological knowledge.” (*Id.* ¶ 3). Finally, NCME is a professional organization “for individuals involved in assessment, evaluation, testing, and other aspects of educational measurement.” (*Id.* ¶ 4).

3. Public Resource

Defendant Public Resource is a not-for-profit entity devoted to publicly disseminating

legal information. (ASTM DSMF ¶¶ 1–2 (ASTM ECF No. 120-3); AERA DSMF ¶¶ 1–2 (AERA ECF No. 68-3)). Its mission is “make the law and other government materials more widely available so that people, businesses, and organizations can easily read and discuss [the] laws and the operations of government.” (ASTM DSMF ¶ 2; AERA DSMF ¶ 2). Public Resource has posted government-authored materials on its website, including judicial opinions, Internal Revenue Service records, patent filings, and safety regulations. (ASTM DSMF ¶¶ 3–4; AERA DSMF ¶¶ 3–4). It does not charge fees to view or download the materials on its website. (ASTM DSMF ¶ 5; AERA DSMF ¶ 5).

B. Incorporation by Reference of Industry Standards

In the United States, a complex public-private partnership has developed over the last century in which private industry groups or associations, rather than government agencies, typically develop standards, guidelines, and procedures that set the best practices in a particular industry.³ Applicable standards are used by entities and individuals in order to self-regulate and conform to the best practices of that industry. Professor Peter Strauss has noted that “manufacturing and markets are greatly aided, and consumers offered protection, by the application of uniform industrial standards created independent of law, as means of assuring quality, compatibility, and other highly desired market characteristics.” Peter L. Strauss, *Private Standards Organizations and Public Law*, 22 Wm. & Mary Bill Rts. J. 497, 499 (2013).

³ See U.S. Office of Management and Budget, Revised Circular No. A-119, https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/revised_circular_a-119_as_of_1_22.pdf (“OMB Revised Circular”) at 1 (Jan. 27, 2016) (“The vibrancy and effectiveness of the U.S. standards system in enabling innovation depends on continued private sector leadership and engagement. Our approach—reliance on private sector leadership, supplemented by Federal government contributions to discrete standardization processes as outlined in OMB Circular A-119—remains the primary strategy for government engagement in standards development.”).

Standards are typically developed by standards developing organizations (“SDOs”), like Plaintiffs, who work to develop “voluntary consensus standards,” such as those here. Voluntary consensus standards are the ultimate product of many volunteers and association members from numerous sectors bringing together technical expertise. They are “developed using procedures whose breadth of reach and interactive characteristics resemble governmental rulemaking, with adoption requiring an elaborate process of development, reaching a monitored consensus among those responsible within the SDO.” *Id.* at 501. ASTM Plaintiffs develop their standards using technical committees with representatives from industry, government, consumers, and technical experts. (ASTM PSMF ¶¶ 7, 28, 29, 109, 114, 135). These committees conduct open proceedings, consider comments and suggestions, and provide for appeals, and through subcommittees, draft new standards, which the full committees vote on. (*Id.* ¶¶ 31–37, 109, 136, 139). The AERA Plaintiffs developed the 1999 Standards through a Joint Committee which considered input from the public in a notice-and-comment process. (AERA PSMF ¶¶ 13–16).

Pursuant to 5 U.S.C. § 552, federal agencies may incorporate voluntary consensus standards—as well as, for example, state regulations, government-authored documents, and product service manuals—into federal regulations by reference. *See* Emily S. Bremer, *Incorporation by Reference in an Open-Government Age*, 36 Harv. J.L. & Pub. Pol’y 131, 145–47 (2013) (providing a general overview of the federal government’s incorporation of materials by reference). The federal government’s practice of incorporation by reference of voluntary consensus standards is intended to achieve several goals, including eliminating the cost to the federal government of developing its own standards, encouraging long-term growth for U.S. enterprises, promoting efficiency, competition, and trade, and furthering the reliance upon private sector expertise. *See* OMB Revised Circular, *supra*, at 14.

Section 552(a)(1) provides that “a person may not in any manner be required to resort to, or be adversely affected by, a matter required to be published in the Federal Register and not so published[, but] . . . matter *reasonably available to the class of persons affected thereby* is deemed published in the Federal Register when incorporated by reference therein with the approval of the Director of the Federal Register.” 5 U.S.C. § 552(a)(1) (emphasis added). The Office of the Federal Register (“OFR”) adopted regulations pursuant to § 552(a)(1) in 1982 and issued revised regulations in 2014. *See* Approval Procedures for Incorporation by Reference, 47 Fed. Reg. 34,107 (Aug. 6, 1982) (codified at 1 C.F.R. § 51.1 *et seq.*); 79 Fed. Reg. 66,267 (Nov. 7, 2014). These regulations specify that a “publication is eligible for incorporation by reference” if it is “published data, criteria, standards, specifications, techniques, illustrations, or similar material; and [d]oes not detract from the usefulness of the Federal Register publication system.” 1 C.F.R. § 51.7(a)(2). To determine whether the material is “reasonably available” as required by the statute, OFR will consider “[t]he completeness and ease of handling of the publication” and “[w]hether it is bound, numbered, and organized, as applicable.” *Id.* § 51.7(a)(3). All the standards at issue in this case have been incorporated by reference into federal law. (ASTM D5MF ¶ 22; 34 C.F.R. § 668.146 (incorporating AERA Plaintiffs’ 1999 Standards)).

Standards that are incorporated by reference are available in person at the OFR in Washington, DC and/or with the incorporating agency. *See* 1 C.F.R. § 51.3(b)(4). Federal regulations that incorporate standards by reference typically direct interested individuals or entities to location(s) where they may view the incorporated documents in person. For example, the Environmental Protection Agency’s (“EPA”) regulation, 40 C.F.R. § 60.17(a), which incorporates numerous standards at issue here, states that:

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. § 552(a) and 1 CFR part 51. . . .

All approved material is available for inspection at the EPA Docket Center, Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW, Washington, DC, telephone number 202-566-1744, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030 or go to http://www.archives.gov/federal-register/code_of_federal_regulations/ibr_locations.html.

The EPA regulation further specifies that, for example, the 206 ASTM standards incorporated by reference by the EPA (some of which are involved in this suit) are “available for purchase from ASTM International, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-2959, (800) 262-1373, <http://www.astm.org>.” 40 C.F.R. § 60.17(h). The U.S. Department of Education incorporated the AERA Plaintiffs’ 1999 Standards by reference at 34 C.F.R. § 668.146(b)(6), which states that the standards are:

on file at the Department of Education, Federal Student Aid, room 113E2, 830 First Street, NE, Washington, DC 20002, phone (202) 377-4026, and at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 1-866-272-6272, or to go: <http://www.archives.gov/federal-register/code-of-federal-regulations/ibr-locations.html>. The document may also be obtained from the American Educational Research Association.

ASTM Plaintiffs sell PDF and hard copy versions of their standards, including those that have been incorporated by reference into law. (ASTM PSMF ¶¶ 57, 99, 157). The prices for the standards in this case range from \$25 to \$200. (*Id.* ¶¶ 58, 99, 158). The ASTM Plaintiffs also maintain “reading rooms” on their websites that allow interested parties to view Plaintiffs’ standards that have been incorporated by reference. (*Id.* ¶¶ 63–64, 100, 161). The standards in these reading rooms are “read-only,” meaning they appear as images that may not be printed or downloaded. (*Id.*). AERA Plaintiffs sell hardcopy versions of the 1999 Standards, but do not sell digital or PDF versions. (AERA PSMF ¶¶ 30, 33). The prices for the 1999 Standards have ranged from \$25.95 to \$49.95 per copy, and they were sold continuously from 2000 through 2014, except for a nearly two-year period. (*Id.* ¶¶ 34–35).

C. Plaintiffs' Claims in This Action

1. ASTM et al. v. Public Resource

This case involves 257 of ASTM Plaintiffs' standards that have been incorporated by reference into federal law. (*See* ASTM Compl. Ex. A–C; ASTM DSMF ¶ 22). Defendant admits that it purchased hard copies of each of the standards at issue, scanned them into PDF files, added a cover sheet, and posted them online. (ASTM DSMF ¶¶ 173–74, 177–78; ASTM PSMF ¶¶ 182–87). Defendant re-typed some of ASTM Plaintiffs' standards and posted them online, with text in Hypertext Markup Language (HTML) format and graphics and figures in Mathematics Markup Language and Scalable Vector Graphics formats. (ASTM DSMF ¶¶ 83, 175). The copies posted on Defendant's website all bore ASTM Plaintiffs' trademarks. (ASTM PSMF ¶ 210). Defendant also uploaded the ASTM Plaintiffs' standards to the Internet Archive, a separate independent website. (*Id.* ¶ 185).

The ASTM Plaintiffs allege that their standards are original works protected from copyright infringement, and brought claims of copyright infringement, contributory copyright infringement, trademark infringement, unfair competition and false designation, and trademark infringement under common law. (ASTM Compl. ¶¶ 142–95). Defendant counter-sued, seeking a declaratory judgment that its conduct does not violate copyright law or trademark law. (ASTM Ans. ¶¶ 174–205). Both sides have filed motions for summary judgment.

2. AERA et al. v. Public Resource

This case involves the 1999 Standards, which AERA Plaintiffs have sold since 2000. (AERA PSMF ¶¶ 34–35). In May 2012, Public Resource purchased a paper copy of the 1999 Standards, disassembled it, scanned the pages, created a PDF file, attached a cover sheet, and, without authorization from the AERA Plaintiffs, posted the PDF file to Public Resource's

website and the Internet Archive. (AERA DSMF ¶ 28; AERA PSMF ¶¶ 69–80). Public Resource posted a read-only version of the 1999 Standards to its website, unlike many of the ASTM Plaintiffs’ standards, which had undergone optical character recognition (“OCR”) processing to be text-searchable. (*Id.* ¶ 73). OCR processing uses a machine to recognize letters and words in a PDF and translate them into letters or words that can be searched and used by text-to-speech software for individuals who are blind or visually impaired. (*Id.* ¶¶ 73–75).

Plaintiffs allege that the 1999 Standards are protected original works, and they brought suit claiming copyright infringement and contributory copyright infringement. (AERA Compl. ¶¶ 50–63). Defendant counter-sued seeking a declaratory judgment that its conduct does not violate copyright law or trademark law. (AERA Ans. ¶¶ 116–37). Both sides have moved for summary judgment.

II. LEGAL STANDARD

Summary judgment may be granted if “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); *see also Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247–48 (1986) (“[T]he mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact.”) (emphasis in original); *Holcomb v. Powell*, 433 F.3d 889, 895 (D.C. Cir. 2006). Summary judgment may be rendered on a “claim or defense . . . or [a] part of each claim or defense.” Fed. R. Civ. P. 56(a).

“A party asserting that a fact cannot be or is genuinely disputed must support the assertion by . . . citing to particular parts of materials in the record.” Fed. R. Civ. P. 56(c)(1)(A). “A fact is ‘material’ if a dispute over it might affect the outcome of a suit under governing law;

factual disputes that are ‘irrelevant or unnecessary’ do not affect the summary judgment determination. An issue is ‘genuine’ if ‘the evidence is such that a reasonable jury could return a verdict for the nonmoving party.’” *Holcomb*, 433 F.3d at 895 (quoting *Liberty Lobby*, 477 U.S. at 248) (citation omitted). The party seeking summary judgment “bears the heavy burden of establishing that the merits of his case are so clear that expedited action is justified.” *Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294, 297 (D.C. Cir. 1987).

In considering a motion for summary judgment, “[t]he evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor.” *Liberty Lobby*, 477 U.S. at 255; *see also Mastro v. Potomac Elec. Power Co.*, 447 F.3d 843, 850 (D.C. Cir. 2006) (“We view the evidence in the light most favorable to the nonmoving party and draw all inferences in its favor.”). The nonmoving party’s opposition, however, must consist of more than mere unsupported allegations or denials, and must be supported by affidavits, declarations, or other competent evidence setting forth specific facts showing that there is a genuine issue for trial. *See* Fed. R. Civ. P. 56(c); *Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986). The non-movant “is required to provide evidence that would permit a reasonable jury to find [in his favor].” *Laningham v. U.S. Navy*, 813 F.2d 1236, 1242 (D.C. Cir. 1987).

III. ANALYSIS

A. Copyright Infringement

Under the Copyright Act, copyright in a work vests initially in the author(s) of that work. 17 U.S.C. § 201(a). Ownership can be transferred in whole or in part, and the exclusive rights of copyright ownership may also be transferred. *Id.* § 201(d). An owner of a valid copyright has the “exclusive right” to reproduce, distribute, or display the copyrighted works as well as prepare derivative works based upon it. *Id.* § 106(1)–(3), (5). Anyone who violates the exclusive rights

of the copyright owner “is an infringer of the copyright or right of the author, as the case may be.” *Id.* § 501(a). The legal or beneficial owner of that exclusive right may then “institute an action for any infringement.” *Id.* § 501(b). In order to succeed on their copyright infringement claims, the Plaintiffs must prove both ““(1) ownership of a valid copyright, and (2) copying of constituent elements of the work that are original.”” *Stenograph, LLC v. Bossard Assoc., Inc.*, 144 F.3d 96, 99 (D.C. Cir. 1998) (quoting *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 361 (1991)).

1. *Feist* Prong 1: Ownership of a Valid Copyright

a. Ownership

The court must first decide the threshold issue of whether Plaintiffs own the copyrights in part or outright such that they have standing to challenge Defendant’s alleged infringement. The Copyright Act provides that possession of a certificate of registration from the U.S. Copyright Office “made before or within five years after first publication of the work shall constitute prima facie evidence,” creating a rebuttable presumption of ownership of a valid copyright. 17 U.S.C. § 410(c); *see also MOB Music Publ’g. v. Zanzibar on the Waterfront, LLC*, 698 F. Supp. 2d 197, 202 (D.D.C. 2010). If the copyright was registered more than five years after the work was published, then the “evidentiary weight to be accorded . . . shall be within the discretion of the court.” 17 U.S.C. § 410(c).

When a party offers as prima facie evidence a registration certificate for a compilation of individual works that it authored, rather than the registration for a specific individual work, a court may consider this to be similar prima facie evidence of ownership, creating the same rebuttable presumption. *See Xoom, Inc. v. Imageline, Inc.*, 323 F.3d 279, 283-84 (4th Cir. 2003), *abrogated by Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154 (2010); *Morris v. Business*

Concepts, Inc., 259 F.3d 65, 68 (2d Cir. 2001), *abrogated on other grounds by Muchnick*, 559 U.S. 154 (2010). Moreover, the registration certificate is sufficient prima facie evidence for the individual works within the compilation if the compilation is deemed to be a “single work.” Federal regulations provide that “all copyrightable elements that are otherwise recognizable as self-contained works, that are included in a single unit of publication, and in which the copyright claimant is the same” constitute a “single work,” such that they are validly registered under a single registration certificate 37 C.F.R. § 202.3(b)(4)(A); *Kay Berry, Inc. v. Taylor Gifts, Inc.*, 4221 F.3d 199, 205–06 (3d Cir. 2005); *Yurman Studio, Inc. v. Castaneda*, 591 F. Supp. 2d 471, 483 (S.D.N.Y. 2008).

Once a copyright holder has proffered this prima facie evidence, the alleged infringer “challenging the validity of the copyright has the burden to prove the contrary.” *Hamil Am., Inc. v. GFI, Inc.*, 193 F.3d 92, 98 (2d Cir. 1999); *United Fabrics Int’l, Inc. v. C&J Wear, Inc.*, 630 F.3d 1255, 1257 (9th Cir. 2011) (infringer “has the burden of rebutting the facts set forth in the copyright certificate”). The defendant-infringer might argue that the plaintiff-copyright holder had some defect in the record-keeping submitted to establish ownership. However, this “skips a step,” as the defendant must first “set forth facts that rebut the presumption of validity to which [the plaintiff’s] copyright is entitled” before attacking the sufficiency of a plaintiff’s evidence of ownership. *United Fabrics*, 630 F.3d at 1257. The infringer must use “*other evidence* in the record [to] cast[] doubt on” the validity of the ownership. *Fonar Corp. v. Domenick*, 105 F.3d 99, 104 (2d Cir. 1997) (emphasis in original). The court in *Fonar* noted that defendant-infringers have overcome the presumption of validity with evidence that the work has been copied from the public domain and evidence that the work was non-copyrightable. *Id.* (citing *Folio Impressions, Inc. v. Byer Cal.*, 937 F.2d 759, 763–64 (2d Cir. 1991); *Carol Barnhart, Inc. v. Economy Cover*

Corp., 773 F.2d 411, 414 (2d Cir. 1985)). Parties challenging the validity of copyright registrations must therefore do more than simply point out potential errors in the certificate. *See* 2 Nimmer on Copyright § 7.20(b)(1) (“a misstatement . . . in the registration application, if unaccompanied by fraud, should neither invalidate the copyright nor render the registration certificate incapable of supporting an infringement action”).

The ASTM Plaintiffs produced copyright certificates for each of the nine standards at issue, and each of these certificates list the ASTM Plaintiffs as the authors of the works.⁴ The AERA Plaintiffs also produced the copyright certificates for the 1999 Standards, listing the AERA Plaintiffs as authors.⁵ Two of ASTM’s standards—D86-07 and D975-07—were registered more than five years after they were published. The court accords these the same evidentiary weight as if they had been registered within five years. *See* 17 U.S.C. § 410(c) (court has discretion over evidentiary weight). Moreover, the court finds that the registration certificate for the 1999 Book of Standards sufficiently establishes prima facie evidence of ASTM’s ownership of D396-98 and D1217-93(98). Therefore, the ASTM Plaintiffs and AERA Plaintiffs have established their ownership of the works at issue with prima facie evidence.

⁴ The nine copyright registrations are provided in the record here:

- ASTM: Ex. 1 to O’Brien Decl. (ASTM D86-07) (ASTM ECF No. 118-7, p. 13); Ex. 2 to O’Brien Decl. (ASTM D975-07) (ASTM ECF No. 118-7, p. 16); Ex. 4 to O’Brien Decl. (1999 Annual Book of ASTM Standards) (ASTM ECF No. 118-7, p. 23); Ex. 3 to O’Brien Decl. (listing ASTM D396-98 and ASTM D1217-93(98) as standards included in the 1999 Annual Book of ASTM Standards) (ASTM ECF No. 118-7, pp. 20–21).
- NFPA: Ex. A to Berry Decl. (National Electrical Code, 2011 ed.) (ASTM ECF No. 118-3, p. 6); Ex. B to Berry Decl. (2014 ed.) (ASTM ECF No. 118-3, p. 8).
- ASHRAE: Ex. 3 to Reiniche Decl. (Standard 90.1, 2004 ed.) (ASTM ECF No. 118-10, page 16); Ex. 4 to Reiniche Decl. (2007 ed.) (ASTM ECF No. 118-10, page 19); Ex. 5 to Reiniche Decl. (2010 ed.) (ASTM ECF No. 118-10, page 22).

⁵ Ex. RRR to Levine Decl. (original copyright registration) (AERA ECF No. 60-83); Ex. SSS to Levine Decl. (2014 corrected registration) (AERA ECF No. 60-84).

The burden to offer evidence disproving ownership thus shifts in both cases to Defendant. *See Zanzibar*, 698 F. Supp. 2d at 202; *Roeslin v. District of Columbia*, 921 F. Supp. 793, 797 (D.D.C. 1995) (finding that because the copyright registration listed plaintiff as the author, the “burden is thus on the defendant to establish” that plaintiff was not the author). To rebut the presumption of validity, in both cases Defendant pointed to the fact that the certificates state that the standards were “works for hire”—i.e., that Plaintiffs acquired authorship and ownership rights because their employees or anyone who signed a work-for-hire agreement wrote the standards—and the certificates further state that Plaintiffs are the authors of the “entire text[s],” when Plaintiffs have said that the standards are drafted by hundreds or thousands of volunteer contributors. Defendant contends that the certificates must list all of these hundreds or thousands of authors in order to be accurate, and that the failure to do so is a material error which strips Plaintiffs of the presumption of ownership. However, Defendant offers scant support for this argument.

Moreover, Defendant failed to meet its initial burden, since it did not adduce any additional evidence *disproving* Plaintiffs’ authorship. Instead, Defendant points to weaknesses in the additional evidence that Plaintiffs proffered to establish their ownership, including questioning whether every one of the hundreds of Plaintiffs’ members who contributed to the standards at issue signed an agreement with appropriate language transferring or assigning copyright ownership to Plaintiffs. Because Plaintiffs may have standing to bring this infringement suit even as part owners of the copyrights, it is not clear why Defendant asserts that Plaintiffs must prove outright ownership of their copyrights. Beyond showing that Plaintiffs’ recordkeeping could perhaps be more thorough, Defendant has not identified any evidence that either the ASTM Plaintiffs or AERA Plaintiffs do not own the copyrights of the standards, in

whole or in part. The court therefore concludes that the ASTM Plaintiffs and AERA Plaintiffs are the owners of the copyrights at issue and have standing to bring their claims.⁶

b. Valid Copyrights

Defendant also argues that Plaintiffs do not own “valid” copyrights under *Feist* because the standards either were never copyrightable or lost their copyright protection upon incorporation by reference into federal regulations. Defendant argues that the standards cannot be copyrighted because: (1) they are methods or systems, which are not entitled to protection under 17 U.S.C. § 102(b); (2) the standards are in the public domain as “the law”; and (3) the merger and *scènes à faire* doctrines preclude a finding of infringement.

(i). *Methods or Systems under Copyright Act § 102(b)*

Section 102(b) of the Copyright Act specifies eight types of works that are not protected by copyright: “In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.” 17 U.S.C. § 102(b). Though these eight types of works are not further defined in the statute, the legislative history accompanying the Copyright Act of 1976 offers some starting guidance: “Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal system of copyright, that the basic dichotomy between expression and idea remains unchanged.” H.R.

⁶ Defendant did not dispute that “ASTM has copyright registrations that cover each of the standards at issue in this litigation” except as to one standard, ASTM D323-58(68). (*See* Def. Statement of Disputed Facts ¶ 70 (ASTM ECF No. 121-3)). Therefore, unless Defendant presents evidence disproving ownership, the court is likely to conclude, based on these copyright registrations, that the ASTM Plaintiffs are the owners of the remaining standards at issue in this litigation, with the exception of D323-58(68). As to this standard, ASTM will need to present additional evidence establishing ownership.

Rep. No. 94-1476, at 57, *reprinted in* 1976 U.S.C.C.A.N. 5659, 5670 (Sept. 3, 1976); S. Rep. No. 94-473 (Nov. 20, 1975); *see also* 1-2A Nimmer on Copyright § 2A.06(a)(1) (summarizing legislative history). The “basic dichotomy” refers to the well-established principle that ideas cannot be copyrighted, but expression of those ideas can be. *See* 1-2A Nimmer on Copyright § 2A.06(a)(2)(b) (a work “is to be denied protection only if that protection would be tantamount to protecting an excluded category (e.g., idea or method of operation) without regard to the fact that the excluded subject matter is expressed or embodied in expression”).

This section of the Copyright Act codifies the Supreme Court’s 1879 decision in *Baker v. Selden*, 101 U.S. 99 (1897), which denied copyright protection for systems, methods, processes, and ideas. *Baker* evaluated a copyright claim by the author of a manual describing “a peculiar system of book-keeping” against a defendant who published a similar guide to book-keeping using “a similar plan so far as results are concerned[,] but mak[ing] a different arrangement of the columns, and us[ing] different headings.” *Id.* at 100. The Court defined the question as “whether the exclusive property in a system of book-keeping can be claimed, under the law or copyright, by means of a book in which that system is explained.” *Id.* at 101. In answering this question, the Court offered as an example that “[t]he copyright of a work on mathematical science cannot give to the author an exclusive right to the methods of operation which he propounds, or to the diagrams which he employs to explain them, so as to prevent an engineer from using them whenever occasion requires.” *Id.* at 103. This distinction between the actual method or system described by a work, which cannot be copyrighted, and the written words describing it, which can, is fundamental to understanding the Copyright Act’s modern limitations to copyright protection in § 102(b).

Defendant primarily argues that the Plaintiffs’ standards are completely devoid of

creative expression and are merely recitations of processes or procedures that a person or entity would follow. Part of this argument appears to rest only on the fact that the names of the ASTM Plaintiffs' standards, and their descriptions or advertisements, include the words "method" and "procedure." *See, e.g.*, ASTM D86-07 Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, Ex. 6 to Decl. of Thomas O'Brien ("O'Brien Decl.") (ASTM ECF No. 118-7 at 107)); ASTM D1217-93(98) Standard Test Method for Density and Relative Density (Specific Gravity) of Liquids by Bingham Pycnometer, Ex. 9 to O'Brien Decl. (ASTM ECF No. 118-7 at 136). Additionally, the AERA Plaintiffs' Rule 30(b)(6) representative noted that the 1999 Standards "describe procedures, statistical procedures, research procedures . . . how to design a test, how to collect evidence of validity, [and] how to calculate the reliability of tests." (Def. Br. at 32 (citing AERA DSMF ¶ 77)). However, simply calling a work a "procedure" or a "method" does not revoke its copyright protection under the Copyright Act. This argument misunderstands or ignores the expression/idea dichotomy rooted in *Baker* and codified in § 102(b).

Defendant also emphasizes that because the Plaintiffs' standards are highly technical, complex, and precise, and because testimony shows that the ASTM Plaintiffs attempt to create the "best" standards, then the standards are "dictated by utility" or just "discovered facts," and lack any creative expressive content. However, the court rejects the argument that voluntary consensus standards, such as those here, are analogous to a list of ingredients or basic instructions in a recipe, or a series of yoga poses, as in the cases cited by Defendant. Not only is there a vast gulf between the simplicity of an ingredient list and the complexity of the standards,

but, more importantly, the standards plainly contain expressive content.⁷ As one example, ASTM D1217-93 lists under the heading “Significance and Use”: “Although [the standard] is no longer employed extensively for the purpose, this test method is useful whenever accurate densities of pure hydrocarbons or petroleum fractions with boiling points between 90 and 110°C are required.” (ASTM ECF No. 118-7 at 136).

The standards in these cases contain expression that is certainly technical but that still bears markings of creativity. As the Supreme Court instructed in *Feist*, “the requisite level of creativity is extremely low; even a slight amount will suffice. The vast majority of works make the grade quite easily, as they possess some creative spark, ‘no matter how crude, humble or obvious’ it might be.” 499 U.S. at 345 (quoting 1 M. Nimmer & D. Nimmer, Copyright § 1.08(C)(1) (1990)). Moreover, as Defendant conceded, there are many possible forms of expression through which the technical material in the standards could be conveyed, and the volunteer and association members who collectively author the standards “debate wording in the standards.” (Def. Br. at 32 (ASTM ECF No. 121)). Thus, however “humble” or “obvious” Defendant finds the Plaintiffs’ creative choices, the standards still bear at least the “extremely low” amount of creativity required by the Supreme Court. Moreover, the undisputed record evidence also shows that other parties have written different standards on the same exact subject matter as ASTM Plaintiffs’ standards, undermining the argument that the standards are so technical and precise there can be only one possible expression. (ASTM PSMF ¶¶ 38, 133).

Importantly, *Baker* and § 102(b) bar Plaintiffs from attempting to copyright the system or

⁷ Defendant does not request that this court scour the over 1,000 pages of the nine of ASTM Plaintiffs’ standards provided to the court or the over 200 pages of the 1999 Standards, and the court was not provided with copies of the remaining standards. The court declines to engage in such an exercise here.

method *itself*, not the written work explaining or describing that method. Here, the copyright protections held by the Plaintiffs do not prevent any person or entity from using or applying the procedures described in the standards, only from copying their written descriptions of those standards. Defendant presented no evidence that the Plaintiffs have sought to block an entity or person from *using* the procedures described in the standards. In fact, use of the procedures described is the *entire purpose* of such voluntary consensus standards. The court therefore concludes that § 102(b) of the Copyright Act does not preclude these standards from being copyrighted.

(ii). *Loss of Copyright Upon Entering the Public Domain*

A. Federal Law Does Not Bar Copyrightability

At the heart of Defendant's defense is the argument that Plaintiffs' standards lost their copyright protections the instant they were incorporated by reference into federal regulations. There are weighty policy arguments on both sides of this issue, including the need to preserve a vital and complicated public-private partnership between the government and SDOs, and the need for an informed citizenry to have a full understanding of how to comply with the nation's legal requirements. However, this suit is not about access to the law in a broad sense, but instead about the validity of copyrights for these standards under current federal law. Copyright protection is a creature of statute, and as such is the result of careful policy considerations by Congress. In the view of this court, Congress has already passed on the question of revoking copyright protection for standards that have been incorporated by reference into regulations, and any further consideration of the issue must be left to Congress for amendment.

Section 105 of the Copyright Act states that "[c]opyright protection under this title is not available for any work of the United States Government." 17 U.S.C. § 105. The Act defines a

“work of the United States Government” as “a work prepared by an officer or employee of the United States Government as part of that person’s official duties.” *Id.* § 101. These are the only government-related works that outright lack copyright under the law. For other types of works, such as those commissioned by the government or created under government contract by private parties, Congress chose to make case-by-case decisions and leave the determination of whether private copyright should exist to the federal agency that commissioned or contracted for the work. The House Report accompanying the Copyright Act states:

The bill deliberately avoids making any sort of outright, unqualified prohibition against copyright in works prepared under Government contract or grant. There may well be cases where it would be in the public interest to deny copyright in the writings generated by Government research contracts and the like; it can be assumed that, where a Government agency commissions a work for its own use merely as an alternative to having one of its own employees prepare the work, the right to secure a private copyright would be withheld. However, there are almost certainly many other cases where the denial of copyright protection would be unfair or would hamper the production and publication of important works. Where, under the particular circumstances, Congress or the agency involved finds that the need to have a work freely available outweighs the need of the private author to secure copyright, the problem can be dealt with by specific legislation, agency regulations, or contractual restrictions.

H.R. Rep. No. 94-1476, at 5672 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5672.

Defendant argues that Sections 102(b) (no protection for systems or methods) and 105 (no protection for Government-authored works) should be read together to indicate that Congress intended that there be no copyright protections for incorporated standards because, like judicial opinions—which the Supreme Court nearly two hundred years ago determined could not be copyrighted—the standards, once incorporated, are “legal facts” which cannot be copyrighted. *See Wheaton v. Peters*, 33 U.S. 591, 668 (1834) (writing that the Court was “unanimously of the opinion that no reporter has or can have any copyright in the written opinions delivered by this Court”); *Banks v. Manchester*, 128 U.S. 244, 253 (1888) (“The whole work done by the judges

constitutes the authentic exposition and interpretation of the law, which, binding every citizen, is free for publication to all, whether it is a declaration of unwritten law, or an interpretation of a constitution or a statute.”). While these cases form the bedrock for the long-standing principle that works authored by government officials or employees cannot be copyrighted, the cases involved works by actual government officials—i.e., judges—acting in their official capacity, unlike here. That was the principle codified in § 105 of the Copyright Act and restated in the U.S. Copyright Office’s Compendium of Copyright Office Practices § 313.6(c)(2) (3d ed. 2014), which states: “As a matter of longstanding public policy, the U.S. Copyright Office will not register a government edict that has been issued by any state, local, or territorial government, including legislative enactments, judicial decisions, administrative rulings, public ordinances, or similar types of official legal materials.”

Congress was well aware of the potential copyright issue posed by materials incorporated by reference when it crafted Section 105 in 1976. Ten years earlier, Congress had extended to federal agencies the authority to incorporate private works by reference into federal regulations. *See* Pub. L. No. 90-23, § 552, 81 Stat. 54 (1967) (codified at 5 U.S.C. § 552) (providing that “matter reasonably available to the class of persons affected thereby is deemed published in the Federal Register when incorporated by reference therein with the approval of the Director of the Federal Register”). However, in the Copyright Act of 1976, Congress made no mention of these incorporated works in § 105 (no copyright for “any work of the United States Government”) or any other section. As the House Report quoted above indicates, Congress already carefully weighed the competing policy goals of making incorporated works publicly available while also preserving the incentives and protections granted by copyright, and it weighed in favor of preserving the copyright system. *See* H.R. Rep. No. 94-1476, at 60 (1976) (stating that under

§ 105 “use by the Government of a private work would not affect its copyright protection in any way”); *see also M.B. Schnapper v. Foley*, 667 F.2d 102, 109 (D.C. Cir. 1981) (analyzing Copyright Act and holding that “we are reluctant to cabin the discretion of government agencies to arrange ownership and publication rights with private contractors absent some reasonable showing of a congressional desire to do so”).

However, recognizing the importance of public access to works incorporated by reference into federal regulations, Congress still requires that such works be “reasonably available.” 5 U.S.C. § 552(a)(1). Under current federal regulations issued by the Office of the Federal Register in 1982, a privately authored work may be incorporated by reference into an agency’s regulation if it is “reasonably available,” including availability in hard copy at the OFR and/or the incorporating agency. 1 C.F.R. § 51.7(a)(3). Thirteen years later, Congress passed the National Technology Transfer and Advancement Act of 1995 (“NTTAA”) which directed all federal agencies to use privately developed technical voluntary consensus standards. *See* Pub. L. No. 104-113, 110 Stat. 775 (1996). Thus, Congress initially authorized agencies to incorporate works by reference, then excluded these incorporated works from § 105 of the Copyright Act, and, nearly twenty years later, specifically directed agencies to incorporate private works by reference. From 1966 through the present, Congress has remained silent on the question of whether privately authored standards and other works would lose copyright protection upon incorporation by reference. If Congress intended to revoke the copyrights of such standards when it passed the NTTAA, or any time before or since, it surely would have done so expressly. *See Whitman v. Am. Trucking Ass’ns, Inc.*, 531 U.S. 457, 468 (2001) (“Congress . . . does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not . . . hide elephants in mouseholes.”); *United States v. Fausto*, 484 U.S. 439, 453 (1988)

(“[It] can be strongly presumed that Congress will specifically address language on the statute books that it wishes to change.”). Instead, Congress has chosen to maintain the scheme it created in 1966: that such standards must simply be made reasonably available. *See* 5 U.S.C. § 552(a)(1).

Moreover, Congress has similarly determined that online access to the nation’s laws and regulations need not be provided for no cost. In establishing “a system of online access to the Congressional Record [and] the Federal Register,” Congress authorized the Superintendent of Documents, under the direction of the Director of the Government Publishing Office, to “charge reasonable fees for use of the directory and the system of access.” 44 U.S.C. §§ 4101–02. While citing this statute and noting that the Superintendent has chosen not to charge fees for online access, OFR in its 2013 proposed rulemaking stated that Congress had not made a policy determination that online access to the law must be provided free of charge. *See* Incorporation by Reference, 78 Fed. Reg. 60,784, 60,785 (Oct. 2, 2013). Similarly, OFR recently determined that “reasonably available” under § 552(a)(1) did not mean availability for no cost on the Internet. *See id.* (considering proposed amendments to OFR’s regulations on incorporation by reference and specifically addressing and rejecting the argument that standards incorporated by reference should be posted online for free in order to be reasonably available).

Importantly, there is no evidence that the ASTM Plaintiffs’ standards or the AERA Plaintiffs’ standards are unavailable to the public. In fact, the undisputed record evidence shows that the standards are required to be available in physical form from OFR (*see* 1 C.F.R. § 51.3(b)(4)); are available for purchase from the AERA Plaintiffs in hard copy (AERA PSMF ¶ 34) and from the ASTM Plaintiffs in hard copy and PDFs (*see* ASTM PSMF ¶¶ 57, 99, 157); and are accessible in read-only format for free in ASTM Plaintiffs’ online reading rooms (*see*

ASTM PSMF ¶¶ 64, 100, 161). While Defendant argues that the public requires *greater* access to the standards—in particular, free online access in formats other than read-only—that is a policy judgment best left to Congress. The arguments raised by the parties and by amici highlight important considerations regarding unrestricted access to the texts of laws, regulations, and incorporated materials, as well as the strong need to protect the economic incentives for the further creation of new standards through revenues from the sale of existing standards. This is the policy balancing that Congress is presumed to have already engaged in, and any further changes to the law in light of new technological developments and resulting changes in public expectations of access to information are best addressed by Congress, rather than this court.

B. Due Process Concerns Do Not Bar Copyrightability

Defendant further argues that even if the Copyright Act does not bar copyright protection for incorporated standards, individuals have a due process right to access the text of “the law,” including the standards at issue here. Four Circuit Courts have considered similar arguments regarding copyrighted works incorporated by reference into state and federal regulations. *See Bldg. Officials & Code Admins. v. Code Tech., Inc.*, 628 F.2d 730 (1st Cir. 1980) (“BOCA”) (declining to rule on the question); *CCC Info. Servs., Inc. v. McLean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 74 (2d Cir. 1994) (upholding copyright in work incorporated by reference); *Cnty. of Suffolk, N.Y. v. First Am. Real Estate Solutions*, 261 F.3d 179 (2d Cir. 2001) (same); *Practice Mgmt. Info. Corp. v. Reports, Inc.*, 121 F.3d 516, 518 (9th Cir. 1997) (same); *Veeck v. S. Bldg. Code Cong. Int’l, Inc.*, 293 F.3d 791, 796 (5th Cir. 2002) (en banc) (holding that incorporation by reference revoked the copyright owner’s copyright protection). The court will briefly describe each of these Circuit decisions.

The question of whether a privately-authored, copyrighted work might lose its copyright

protection after being referenced in a law was first discussed by the First Circuit in *BOCA*. That case involved a nonprofit, BOCA, which authored and copyrighted a model code called the “Basic Building Code.” *See* 628 F.3d at 731-32. Massachusetts adopted a building code based in substantial part on the BOCA Basic Building Code, called the Commonwealth of Massachusetts State Building Code. *Id.* at 732. BOCA sold a printed version of the Massachusetts State Building Code for \$22 a copy, and the state referred any persons interested in obtaining a copy of the code for their own use to BOCA. *Id.* The defendant, Code Tech., Inc., published its own copy of the Massachusetts State Building Code and sold it for \$35 per volume. *Id.* In the subsequent copyright infringement suit, the district court granted BOCA’s request for a preliminary injunction, and the First Circuit reversed, though it reserved judgment on the merits of whether the building code was validly copyrighted. Instead, it noted that “[t]he citizens are the authors of the law, and therefore its owners, regardless of who actually drafts the provisions, because the law derives its authority from the consent of the public, expressed through the democratic process.” *Id.* at 734.

The Second Circuit considered similar issues in two cases. First, in *CCC*, the court considered whether copyright protection for a compilation called the Red Book, which listed used car valuations, was revoked after it was referenced by states as one of several references for car valuation. *See* 44 F.3d at 74. The court rejected the argument that referenced works enter the public domain, stating: “We are not prepared to hold that a state’s reference to a copyrighted work as a legal standard for valuation results in loss of the copyright. While there are indeed policy considerations that support [defendant’s public domain] argument, they are opposed by countervailing considerations.” *Id.* The court then analogized to a state education system assigning copyrighted books as a mandatory part of a school curriculum and noted that under the

public domain logic, these books might lose copyright protection. *Id.*

Second, in *County of Suffolk*, the Second Circuit considered the copyrightability of a county's tax maps. The court looked to *Banks*, in which the Supreme Court held that judicial opinions were not copyrightable, and determined that *Banks* established two premises: (1) that judges' opinions cannot be copyrighted because judges receive their salaries from the public treasury and do not have the economic incentives that copyrights are designed to protect; and (2) there are due process considerations because the "whole work done by the judges constitutes the authentic exposition and interpretation of the law, which, binding every citizen, is free for publication to all." 261 F.3d at 193–94 (citing *Banks v. Manchester*, 128 U.S. 244, 253 (1888)). Building on these premises, the Second Circuit articulated two factors that should guide courts' analysis in these situations: first, "whether the entity or individual who created the work needs an economic incentive to create or has a proprietary interest in creating the work"; and second, "whether the public needs notice of this particular work to have notice of the law." *Id.* at 194 (citing *Practice Management*, 121 F.3d at 518–19; *BOCA*, 628 F.2d at 734–35). With regard to this second factor, the court primarily considered the severity of criminal or civil sanctions associated with failure to adhere to the maps at issue. Finding no serious penalties, it focused on the fact that citizens had "fair warning" of the tax maps from their reference in the tax statute, and there was "no allegation that any individual required to pay the applicable property tax ha[d] any difficulty in obtaining access to either the law or the relevant tax map." *Id.* at 195. Therefore, the maps were entitled to copyright protection.

Like the Second Circuit, the Ninth Circuit in *Practice Management* also decided to preserve the copyright protections in the American Medical Association's ("AMA") publication of medical codes and descriptions which had been incorporated by reference by the U.S. Health

Care Financing Administration (“HCFA”). Under the HCFA’s regulation, parties seeking health insurance reimbursement for Medicare were required to use the codes created and copyrighted by the AMA. *See* 121 F.3d at 518. The Ninth Circuit similarly looked to *Banks* and focused on its premise that there is a due process interest in free access to the law. Like the Second Circuit, the court considered this due process interest and ultimately rejected revoking the AMA’s copyright because “[t]here [was] no evidence that anyone wishing to use the [copyrighted codes] ha[d] any difficulty obtaining access to it.” *Id.* at 519.

Finally, counter to the opinions of other circuits, the Fifth Circuit sitting *en banc* in *Veeck* focused more heavily on the first *Banks* premise regarding economic incentives and held that copyright protection is revoked when a model code is adopted as law by a municipality, stating that “as law, the model codes enter the public domain and are not subject to the copyright holder’s exclusive prerogatives.” 293 F.3d at 793. However, the court carefully distinguished its decision from the facts in the aforementioned cases. It wrote:

[T]he limits of this holding must be explained. Several national standards-writing organizations joined [defendant] as amici out of fear that their copyrights may be vitiated simply by the common practice of governmental entities’ incorporating their standards in laws and regulations. This case does not involve references to extrinsic standards. Instead, it concerns the wholesale adoption of a model code promoted by its author, [defendant], precisely for use as legislation. Caselaw that derives from official incorporation of extrinsic standards is distinguishable in reasoning and result. . . . If a statute refers to the Red Book or to specific school books, the law requires citizens to consult or use a copyrighted work in the process of fulfilling their obligations. The copyrighted works do not ‘become law’ merely because a statute refers to them. . . . Equally important, the referenced works or standards in *CCC* and *Practice Management* were created by private groups for reasons other than incorporation into law. To the extent incentives are relevant to the existence of copyright protection, the authors in these cases deserve incentives. . . . In the case of a model code, on the other hand, the text of the model serves no other purpose than to become law.

Id. at 803–05. The cases before the court, involving some of the same amici referenced in *Veeck*, do not involve model codes adopted verbatim in their entirety into legislation. Instead, the

standards incorporated by reference provide guidelines and procedures that individuals or entities must use or reference in the fulfillment of their legal obligations under federal regulations.

Applying the first premise of *Banks* to the facts here, Defendant argues that Plaintiffs do not require economic incentives to create their standards because they actively lobby and advocate for their standards to be incorporated by reference into regulations, including investing funds on lobbying to that effect. Therefore, Defendant argues, the court should find that Plaintiffs create standards for no purpose other than adoption into law, as the *Veeck* court determined regarding the model code in that case. Here however, the facts indicate that Plaintiffs create standards for a wide range of industries, that the majority of their standards are not incorporated into regulations, and that even those that have been incorporated by reference have undergone updates and revisions to reflect modern use, despite the regulations incorporating past versions. Plaintiffs and supporting amici highlight that without copyright protection for all of their standards, they will face significant difficulty raising the necessary revenue to continue producing high-quality voluntary consensus standards. In its Notice of Proposed Rulemaking, OFR relied on this same argument to ultimately reject a proposal to require free online access to standards in its “reasonably available” determination. 78 Fed. Reg. at 60,785 (“If we required that all materials IBR’d into the CFR be available for free, that requirement would compromise the ability of regulators to rely on voluntary consensus standards, possibly requiring them to create their own standards, which is contrary to the NTTAA and the OMB Circular A-119.”).

As for the second premise of *Banks*, this court finds that, as in the cases before the Second and Ninth Circuits, there is no evidence here that anyone has been denied access to the standards by the ASTM Plaintiffs or AERA Plaintiffs. Instead, Defendant simply argues that the

public should be granted more expansive access.

Therefore, considering the *Banks* holdings and given the existing statutory, regulatory, and judicial framework, this court finds that Plaintiffs' standards have not entered the public domain upon their incorporation by reference into federal regulations and do not lose their copyright protection. This conclusion does not dismiss or diminish the valid public policy concern that citizens benefit from greater access to statutes, regulations, and all materials they must reference in fulfilling their legal obligations. The ability to know, understand, and communicate the law as a broad concept is of paramount importance to the continued success of our democracy. However, changes to the statutory or regulatory framework that reconsider the balancing of interests underlying modern copyright law and incorporation by reference must be made by Congress, not this court.

(iii). *Merger Doctrine*

Defendant asks the court to apply the "merger doctrine" to find that the standards cannot be copyrighted because the expressions in the standards have merged with the law to become facts. Under modern copyright law, there is a well-known dichotomy between "expression," which can generally be copyrighted, and "ideas," which cannot. 4-13 Nimmer on Copyright § 13.03. The merger doctrine has developed to consider those specific situations in which "the idea 'merges' with the expression, such that a given idea is inseparably tied to a particular expression." *Id.* at § 13.03(3). This can occur when there "are so few ways of expressing an idea [that] not even the expression is protected by copyright." *Id.* (quoting *BUC Int'l Corp. v. Int'l Yacht Council Ltd.*, 489 F.3d 1129, 1143 (11th Cir. 2007)).

The parties disagree as to the proper merger doctrine analysis. Defendant argues that upon their incorporation by reference, the standards become "merged" with the "fact" that is the

law. Plaintiffs argue that to determine if an idea and expression have merged, the court should focus on whether there were any other ways of articulating a particular idea when the work was first published, not when it was later incorporated by reference. In essence, the parties disagree as to whether the merger doctrine is a question of copyrightability—meaning the Plaintiffs’ standards might lose copyright protection upon incorporation by reference—or an affirmative defense to copyright infringement—i.e., the allegedly infringing work did not violate copyright because there was no other way to express the content of the work. Plaintiffs argue that the merger doctrine addresses only the question of copyrightability, and so the court’s analysis should focus on whether, at the time the standards were authored, there were no other ways to articulate and arrange such standards. Defendant contends that the standards could not be expressed any other way after incorporation into regulations, and thus its display of the standards was not infringement.

The court declines to resolve this merger doctrine issue, since under either approach, the standards maintain copyright protection. At the time they were authored, there were certainly myriad ways to write and organize the text of the standards, and, for the reasons discussed above, the standards did not lose their copyright protections upon incorporation by reference into federal regulations. Therefore, the merger doctrine neither precludes a finding of copyrightability nor serves as a defense for Defendant.

(iv). *Scènes à Faire Doctrine*

Finally, Defendant points to the *scènes à faire* doctrine, which similarly may be approached as a question of copyrightability or an affirmative defense. The doctrine typically applies to “incidents, characters, or settings which are as a practical matter indispensable, or at least standard, in the treatment of a given topic.” Nimmer § 13.03(4) (quoting *Atari, Inc. v.*

North Am. Philips Consumer Elecs. Corp., 672 F.2d 607, 616 (7th Cir. 1982), *cert. denied*, 459 U.S. 880 (1982)). Nimmer offers examples such as the use of a bar room scene in a film about a broken-hearted lover because, as the name of the doctrine suggests, these are “scenes which must be done.” *Id.* Defendant argues here that Plaintiffs’ standards are entirely “uncopyrightable” because they are “shaped by external factors,” such as the desire to satisfy regulations and laws and to write what Plaintiffs believe to be the most accurate and clear standards. (Tr. of Motions Hearing at 62:15–19 (ASTM ECF No. 173); Def. Br. at 34). However, this doctrine is a poor fit for Defendant’s arguments. In the court’s view, there is a great deal of difference between every detail of the phrasing, explanation, and organization across thousands of pages of standards, which Defendant argues is *entirely* dictated by Plaintiffs’ broad desires for accuracy and clarity, and the inclusion of a generic bar room scene in a romantic drama where the audience expects it. Defendant offers no cases to support its argument that this doctrine bars copyrightability of the standards at issue here, and this court knows of none. The court concludes that the *scènes à faire* doctrine does not act as a bar to the copyrightability of Plaintiffs’ standards and does not serve as a defense for Defendant’s display of the standards

In sum, the court concludes that Plaintiffs own valid copyrights over the standards at issue, and that the copyrights were not stripped upon the incorporation by reference into federal regulations.

2. *Feist* Prong 2: Copying an Original Work

a. Overview

Having established that both the ASTM Plaintiffs and AERA Plaintiffs own valid copyrights in the standards at issue, the second question for the court under *Feist* is whether Public Resource, by scanning and posting online the standards at issue “cop[ied] anything that

was ‘original’ to” the Plaintiffs. *Feist*, 499 U.S. at 361. Copying means exercising any of the exclusive rights that 17 U.S.C. § 106 vests in the owners of a copyright. *See Call of the Wild Movie, LLC v. Does*, 770 F. Supp. 2d 332, 351 (D.D.C. 2011). These rights include the rights of reproduction, distribution, display, and creation of derivative works. *See* 17 U.S.C. § 106(1)–(3), (5). There is no factual dispute that Public Resource reproduced and posted online for display or distribution the standards at issue in this case. Having rejected the application of the merger doctrine or *scènes à faire* doctrine as affirmative defenses, Defendant’s only argument on this second prong is therefore that its copying and posting of the standards was “fair use.”

b. Affirmative Defense of Fair Use

Under the Copyright Act, fair use of a copyrighted work “is not an infringement of copyright.” 17 U.S.C. § 107. Fair use is a defense to a claim of copyright infringement in order to “fulfill copyright’s very purpose, ‘to promote the Progress of Science and useful Arts.’”

Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 575 (1994) (quoting U.S. Const. art. I, § 8, cl.

8). The Copyright Act provides that:

In determining whether the use made of a work in any particular case is a fair use, the factors to be considered shall include—

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 107. The statute further lists examples of uses that are “fair use,” including “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research.” *Id.* The fair use doctrine calls for a “case-by-case analysis,” and the four statutory factors are meant to provide “general guidance,” weighed together “in light of the

purposes of copyright.” *Campbell*, 510 U.S. at 578–79.

(i). *Purpose and Character of Defendant’s Use of the Standards*

With regard to the first factor, the statute itself offers guidance on the types of purposes that might be considered fair use: criticism, commentary, news reporting, teaching, or research. *Id.* § 107. Moreover, the Supreme Court has held that courts should focus on whether the new work “supersede[s] the objects of the creation . . . or instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message; [the question], in other words, [is] whether and to what extent the new work is transformative.” *Campbell*, 510 U.S. at 578–79 (internal quotations omitted). Given the constitutional goal of copyright—to promote the development of science and the arts—“the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use.” *Id.* at 579.

It is undisputed that Public Resource scanned the ASTM Plaintiffs’ standards at issue from their physical hardcopies and converted them to searchable PDFs using OCR processing (ASTM Pls. SUMF ¶ 182) and reproduced some of the standards by re-typing them into HTML format. (ASTM PSMF ¶ 182; ASTM DSMF ¶ 83). Public Resource scanned the AERA Plaintiffs’ 1999 Standards from the physical hard copy and converted them to a PDF file, which it then uploaded to its website for display and distribution. (AERA PSMF ¶¶ 69, 71–73; AERA DSMF ¶ 28). Defendant argues this is transformative in three ways: by providing free access to “the law”; by enabling others to use software to analyze the standards; and by enabling those with visual impairments to use text-to-speech software. The evidence does not support any of these arguments.

Defendant first argues that it has transformed Plaintiffs’ standards by making identical

copies of them and distributing them online for no cost. In Defendant's view, this is transformative because it provides individuals with greater access to "the law." While Defendant argues that its conduct is analogous to those who make copies of copyrighted works in order to comply with legal requirements, Defendant was not actually acting to comply with a particular law—unlike, for example, an individual who makes a photocopy of the standards located at OFR for use on her building project. Instead, Defendant has placed identical copies of Plaintiffs' standards into the online marketplace with no intention to use them itself, but instead to simply offer them for free in competition with Plaintiffs' standards. While Defendant did not earn revenue directly from the display of the standards, its activity still bears "commercial" elements given that it actively engaged in distributing identical standards online in the same consumer market. While this commerciality is not by itself dispositive, it does weigh firmly against fair use. *See Campbell*, 510 U.S. at 594.

Defendant points to *Swatch Group Management Services Ltd. v. Bloomberg L.P.*, 756 F.3d 73, 81 (2d Cir. 2014) in support of its proposition that when a copyrighted document is of great public importance then posting it online may be transformative. However, *Swatch Group* involved the recording of a private conference call about the company's earnings report involving executives and 132 analysts that Bloomberg then distributed to subscribers of its Bloomberg Professional service. *Id.* at 78–79. Given that Swatch Group instructed call participants not to record or broadcast the call, any direct knowledge of what the executives said would be limited to those analysts who participated. *Id.* The facts of *Swatch Group* do not align with those here, where the evidence demonstrates that Plaintiffs' standards are available to anyone for viewing online in ASTM Plaintiffs' reading rooms, at a public library, at the OFR or incorporating agency, or for purchase on Plaintiffs' websites. This court is unwilling to apply

any principles from *Swatch Group* or similar cases to this case, in which the standards are widely available.

Next, Public Resource argues that distributing the duplicate copies online is transformative because, with regard to the ASTM Plaintiffs' standards, Public Resource first altered their formatting through application of OCR or conversion to HTML, which enables software analysis or the use of text-to-speech software, and for AERA Plaintiffs' standards, it scanned the hard copy and distributed a PDF version. The court has little difficulty concluding that these actions are not transformative. *See* 4-13 Nimmer on Copyright § 13.05(1)(b); *Nihon Keizai Shimbun, Inc. v. Comline Bus. Data, Inc.*, 166 F.3d 65, 72 (2d Cir. 1999) (holding that a translation is not a transformative, expressive work); *Soc'y of the Transfiguration Monastery, Inc. v. Gregory*, 685 F. Supp. 2d 217, 227 (D. Mass. 2010), *affirmed*, 689 F.3d 29, 59-65 (1st Cir. 2012) ("A simple repackaging of a work in a new format, whether on the Internet or on a CD-ROM or on a flash drive, is not transformative when the result is simply a mirror image reflected on a new mirror."); *see also Authors Guild v. Google, Inc.*, 804 F.3d 202, 207, 217 (2d Cir. 2015) (reasoning Google's scanning and posting of snippets of copyrighted books online was fair use because it made "available information *about* Plaintiffs' books without providing the public with a substantial substitute for matter protected by the Plaintiffs' copyright interests in the original works or derivatives of them" and added "important value to the basic transformative search function, which tells only whether and how often the searched term appears in the book") (emphasis added); *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87, 90 (2d Cir. 2014) (text searching modification was transformative but where full work was not displayed).

Here, Defendant does not actually perform any analysis on the standards, nor does it offer

the service of providing them in an accessible way to those visual impairments. Instead, Defendant has identified a series of events that must occur, involving intervening third parties and the use of one or more additional software programs, in order for there to be a potentially “transformative” use for individuals who are blind or have visual impairments. Defendant in both cases proffered the expert report of James Fruchterman, who opined on accessibility of written materials for those who are blind. In Fruchterman’s AERA report, he wrote that to make a hard copy accessible for those with visual impairments, he would scan the pages, process them with OCR to convert the read-only images to searchable text, create a Microsoft Word file, and then have it proofread because OCR can create numerous errors. (Expert Rep. of James R. Fruchterman at 8 (AERA ECF No. 70-50)). Once such a version is then uploaded online, an individual who is blind or visually impaired would then need to use additional screen reader software, which “is a program that runs on a personal computer or a smartphone that reads the information on the screen aloud (using a computer-synthesized voice) to a blind person.” (*Id.* at 3–4). While “most blind people themselves do not have the ability to convert books[,] [s]ome blind people have their own home scanners, and if they purchased a used copy online, would be able to scan the 1999 Standards page by page on a home scanner, which would take at least two hours of labor, and then perform optical character recognition on the title.” (*Id.* at 8). In his ASTM report, Fruchterman wrote that he was able to use a screen reader program to read the text of the ASTM Plaintiffs’ standards aloud on Defendant’s website, but not in ASTM Plaintiffs’ reading rooms. (Ex. 96 to Becker Decl., Expert Rep. of James R. Fruchterman at 5–7 (ECF No. 122-6)). Fruchterman noted that some of the PDFs on Defendant’s website were read-only images, such as those on ASTM Plaintiffs’ reading rooms, which had to be copied and pasted into a Microsoft Word document in order for a screen reader program to operate. (*Id.* at 16–17).

He also noted that individuals who are blind may “independently perform optical character recognition on image-based PDFs themselves and access the text that way, and many advanced computer users that are blind would be aware that this is possible.” (*Id.* at 17). He did not opine on whether OCR could be performed on the PDFs of standards that ASTM Plaintiffs sell or whether he attempted to investigate that as part of his research.

While it appears Defendant may enable blind individuals, like all other individuals, to access the standards at no cost, they still may have to take additional steps like OCR processing or converting to a different file type, as well as using additional screen reader programs in order to access the standards. There is no evidence that this would not be possible with Plaintiffs’ PDFs or by scanning Plaintiffs’ hard copy standards. In Defendant’s view, taking the first step or two towards making the standards entirely accessible to those with visual impairments is enough to have transformed the standards. This attempts to stretch logic, and certainly the doctrine of fair use, too far. Defendant has not offered a sufficiently new purpose to render the use transformative, and this weighs against a finding of fair use.

(ii). *Nature of the Copyrighted Standards*

The Supreme Court in *Campbell* instructs that courts should analyze the nature of the copyrighted work with “recognition that some works are closer to the core of intended copyright protection than others, with the consequence that fair use is more difficult to establish when the former works are copied.” 510 U.S. at 586. Many cases create a spectrum between creative, fictional expression and factual expression, with the former being “more” protected. *See* 4-13 Nimmer § 13.05(A)(2). Defendant argues that Plaintiffs’ standards are “factual,” both because they are highly technical and because they are “the law.” However, the Constitution explicitly states that copyright exists to “advance the progress of science and the useful arts.” U.S. Const.

art. I, § 8, cl. 8. That Plaintiffs’ works involve technical scientific concepts and guidelines does not push it away from the core of intended copyright protection, but actually brings it closer. Plaintiffs’ standards are vital to the advancement of scientific progress in the U.S. and exactly the type of expressive work that warrants full protection under the Constitution and the Copyright Act.

(iii). Amount and Substantiality of the Portions Defendant Used

The third factor, “the amount and substantiality of the portion used in relation to the copyrighted work as a whole,” 17 U.S.C. § 107(3), weighs overwhelmingly in Plaintiffs’ favor and against a finding of fair use. It is undisputed that Defendant copied and distributed identical versions of the Plaintiffs’ standards in their entirety. To support its actions as fair use under this third factor, Public Resource argues that it was necessary to do so because the full text of the standards were incorporated into “the law.” However true it may be that individuals wishing to read the text of standards incorporated by reference would want to read them in their entirety, this argument is unpersuasive in the fair use analysis. Any market competitor wishing to copy a rival’s work and distribute it itself could argue that it “needs” to copy the entire work, otherwise its distribution would be less successful. Unsurprisingly, Defendant cannot point to a single case that supports its view, and the court finds that this factor also weighs strongly against a finding of fair use.

(iv). Effect of Defendant’s Use Upon Potential Market or Value

The fourth factor, “the effect of the use upon the potential market for or value of the copyrighted work,” 17 U.S.C. § 107(4), “poses the issue of whether unrestricted and widespread conduct of the sort engaged in by the defendant would . . . result in a substantially adverse impact on the potential market for, or value of, the plaintiff’s present work,” 4-13 Nimmer on

Copyright § 13.05(A)(4); *Campbell*, 510 U.S. at 589 (quoting *Nimmer*). Moreover, the analysis “must take into account not only of harm to the original but also of harm to the market for derivative works.” *Campbell*, 510 U.S. at 589 (quoting *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 568 (1985)). When Defendant engages in “mere duplication for commercial purposes,” as here, a harm to the potential market for the copyrighted works may be inferred. *See id.* at 590–91. Such an inference is intuitive based on the facts here where consumers in the online marketplace are currently presented with the option to purchase a PDF or hard copy version of Plaintiffs’ standards directly from them, or may download a PDF of an identical standard for no cost. The only logical conclusion is that this choice negatively impacts the potential market for Plaintiffs’ standards.

In *Campbell*, the Supreme Court noted that “[s]ince fair use is an affirmative defense, its proponent would have difficulty carrying the burden of demonstrating fair use without favorable evidence about relevant markets.” 510 U.S. at 590. Here, Defendant did not offer expert evidence on the economic impact on the markets, instead pointing to testimony by Plaintiffs’ executives that they did not track or know of negative impacts thus far on their revenue from Defendant’s conduct. This is not enough to overcome the logical presumption that such activity, particularly if it became more widespread by others in the marketplace, would impact Plaintiffs’ revenues. It is not Plaintiffs’ burden to establish that they *have* been harmed in the market, but Defendant’s burden to affirmatively establish that such conduct could not even “potentially” harm the Plaintiffs’ market. Defendant has not done so.

(v). *Overall Assessment*

Whatever merit there may be in Defendant’s goal of furthering access to documents incorporated into regulations, there is nothing in the Copyright Act or in court precedent to

suggest that distribution of identical copies of copyrighted works for the direct purpose of undermining Plaintiffs' ability to raise revenue can ever be a fair use. The court thus concludes that the fair use doctrine does not serve as a valid defense for Defendant's conduct.

Therefore, the court finds that the ASTM Plaintiffs' motion for summary judgment as to their copyright infringement claim is GRANTED, and the AERA Plaintiffs' motion for summary judgment as to their copyright infringement claim is also GRANTED. Defendant's cross-motions on copyright infringement are both DENIED.

B. Contributory Copyright Infringement

AERA Plaintiffs additionally move for summary judgment on their contributory copyright infringement claim.⁸ Establishing proof of contributory infringement requires a party to demonstrate that the actor was "intentionally inducing or encouraging direct infringement." *MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005). Plaintiffs⁹ must show (1) direct infringement by third parties; (2) that Defendant knew that third parties were directly infringing; and (3) that Defendant substantially participated in that direct infringement. *Rundquist v. Vapiano SE*, 798 F. Supp. 2d 102, 126 (D.D.C. 2011). "Merely supplying the means to accomplish an infringing activity cannot give rise to the imposition of liability for contributory copyright infringement." *Newborn v. Yahoo!, Inc.*, 391 F. Supp. 2d 181, 186 (D.D.C. 2005) (internal quotation omitted).

⁸ The ASTM Plaintiffs initially brought a separate claim for contributory copyright infringement, but did not include that claim in their motion for summary judgment. Counsel for ASTM Plaintiffs stated at oral argument that they believed the remedy for their infringement claim covered any potential remedy for their contributory copyright claim. (Tr. of Motions Hearing at 122:1-7).

⁹ Because ASTM Plaintiffs did not move for summary judgment on their contributory copyright claim, for this section the court will use "Plaintiffs" to refer to AERA Plaintiffs.

To establish direct infringement by third parties, Plaintiffs must demonstrate “(1) which specific original works form the subject of the copyright claim; (2) that the plaintiff owns the copyrights in those works; (3) that the copyrights have been registered in accordance with the statute; and (4) by what acts [and] during what time the defendant infringed the copyright.” *Id.* (quoting *Home & Nature, Inc. v. Sherman Specialty Co.*, 322 F. Supp. 2d 260, 266 (E.D.N.Y. 2004)). As discussed above in section III(A), these first three elements have been satisfied. On the fourth element, Plaintiffs must show that a third party infringed its copyrights by violating their exclusive rights under 17 U.S.C. § 106, including reproduction, preparation of derivative works, distribution, or public display. *See Home & Nature*, 322 F. Supp. 2d at 267. However, Plaintiffs only present evidence that the 1999 Standards were “accessed at least 4,164 times” on Public Resource’s website and that they were “accessed on the Internet Archive . . . website 1,290 times.” (AERA PSMF ¶¶ 85–86). Without more, there is no basis for the court to determine that accessing a website is equivalent to copying or violating any of the exclusive rights under § 106. Plaintiffs also assert that “some” individuals “obtained” the standards, but their only evidence of this is a redacted e-mail in which an individual states “[O]ne of my students showed up for class this semester and told me that he/she didn’t purchase a copy of the Standards (I require them as a text for one of my courses) because ‘they are available for free on line’ and they showed me the following site.” (Exl. LLL to Decl. of Laress Wise (AERA ECF No. 60-75)). Even if such a statement were ultimately determined to be admissible for the truth of the matter that the student did not purchase the Standards, it still does not establish that the student downloaded or otherwise copied the 1999 Standards from Defendant’s website.¹⁰

¹⁰ The court recognizes that acquiring evidence of downloads may be difficult. Carl Malamud, Public Resource’s CEO, testified at deposition that “I don’t know about downloads. It’s technically impossible to determine that.” (Ex. A to Hudis Decl. at 347:6–8 (AERA ECF No.

In their Reply Brief, Plaintiffs also point to the possibility that simply browsing a website causes a copy of the material on the website to be automatically copied to the computer's random access memory or RAM. *See CoStar Realty Info., Inc. v. Field*, 737 F. Supp. 2d 496, 507 (D. Md. 2010) (analyzing copyright claim involving cache copies of websites in computer's RAM); *Ticketmaster, LLC v. RMG Techs., Inc.*, 507 F. Supp. 2d 1096, 1104–05 (C.D. Cal. 2007) (same). While this may be correct, the fact remains that Plaintiffs have put forth no actual evidence that even one of the 4,164 accesses resulted in such a copying to a computer's RAM, and without such evidence, Plaintiffs cannot meet their burden on their contributory copyright claim at the summary judgment stage.

The second two factors require Plaintiffs to establish that Defendant knew that third parties were engaged in direct infringement and that it substantially participated in such infringement. Plaintiffs may demonstrate knowledge by showing that Defendant was notified of the third party direct infringement or that it “willfully blind[ed] itself to such infringing uses.” *Newborn*, 391 F. Supp. 2d at 186. On this factor, Plaintiffs again fall short, relying on the fact that they asked Defendant to remove the 1999 Standards from its website and Defendant refused to do so, as well as evidence that Defendant did not track or prevent downloads of the 1999 Standards from its website. Without more, this is insufficient to establish that Defendant knew that third parties were infringing the Plaintiffs' copyrights.

Similarly, Plaintiffs have not presented sufficient evidence on the substantial participation factor. While it is undisputed that Defendant posted the 1999 Standards on its website to enable greater access for those wishing to read them, because Plaintiffs have not

60-4)). However, this does not relieve Plaintiffs of the burden of establishing some evidence demonstrating direct infringement by third parties.

established any actual third party direct infringement, there is insufficient evidence that Defendant substantially participated in that infringement.

Therefore, the court DENIES Plaintiffs' motion for summary judgment as to its contributory copyright claim, and also DENIES Defendant's motion for summary judgment on this claim, as there exists questions of fact as to any third party infringement, Defendant's knowledge, and Defendant's participation.

C. Trademark Infringement Claims

ASTM Plaintiffs additionally moved for summary judgment on their trademark infringement, unfair competition and false designation of origin, and common law trademark infringement claims, and Defendant cross-moved for summary judgment on these claims as well.¹¹ Trademark law is governed by the Lanham Act, 15 U.S.C. § 1051 *et seq.*, which provides that:

(1) Any person who shall, without the consent of the registrant . . . (a) use in commerce any reproduction, counterfeit, copy, or colorable imitation of a registered mark in connection with the sale, offering for sale, distribution, or advertising of any goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive . . . shall be liable in a civil action by the registrant for the remedies hereinafter provided.

15 U.S.C. § 1114(1). In order to prevail on a trademark infringement claim under the Lanham Act, Plaintiffs¹² "must show (1) that [they] own[] a valid trademark, (2) that [their] trademark is distinctive or has acquired a secondary meaning, and (3) that there is a substantial likelihood of confusion between the plaintiff[s'] mark and the alleged infringer's mark." *Globalaw Ltd. v. Carmon & Carmon Law Office*, 452 F. Supp. 2d 1, 26 (D.D.C. 2006); *AARP v. Sycle*, 991 F.

¹¹ The AERA Plaintiffs did not bring a trademark claim, and so this section applies only to ASTM Plaintiffs.

¹² As in the preceding section, because only ASTM Plaintiffs moved for summary judgment on this claim, the court will refer to them here as Plaintiffs.

Supp. 2d 224, 229 (D.D.C. 2013) (same). Common law claims are analyzed under the same standard. *See AARP*, 991 F. Supp. 2d at 229 (citing *Breaking the Chain Found., Inc. v. Capitol Educ. Support, Inc.*, 589 F.Supp.2d 25, 29 (D.D.C. 2008)). In order for conduct to be considered infringing, there must be a “use in commerce.” 15 U.S.C. §§ 1114(1), 1125(a)(1).

Defendant cites *Dastar Corp. v. Twentieth Century Fox Film Corp.*, to discourage the court from considering Plaintiffs’ trademark claims on the principle that courts should not “misuse or over-exten[d] [] trademark and related protections into areas traditionally occupied by patent or copyright.” 539 U.S. 23, 34 (2003). *Dastar* held that a plaintiff could not bring a false designation of origin trademark claim against a defendant who was distributing content that had become part of the public domain because the Lanham Act only offers protection “to the producer of the tangible goods that are offered for sale, and not to the author of any idea, concept, or communication embodied in those goods.” *Id.* at 37. Unlike in *Dastar*, Plaintiffs here have an independent basis for claiming that Defendant infringed their trademarks, separate from their copyright infringement claims: Defendant distributed standards online bearing Plaintiffs’ registered trademarks and logos, and Plaintiffs argue that this unauthorized use of their marks will confuse consumers and falsely signal that Plaintiffs are the origin of the standards distributed on Defendant’s website rather than Defendant. While the remedy sought for Plaintiffs’ copyright claim—an injunction barring Defendant from displaying Plaintiffs’ standards online—may be broad enough to subsume a remedy for their trademark claims, the claims are based on independent arguments, and are therefore the type that *Dastar* found to be appropriate for consideration under the Lanham Act.

The court must therefore consider whether Plaintiffs own a valid, protectable trademark, whether Defendant engaged in an unauthorized use in commerce, whether there is a likelihood of

consumer confusion, and whether Defendant's fair use defense permits its use of the trademarks.

1. Valid, Protectable Trademark

Under the Lanham Act, any registration of a trademark "shall be prima facie evidence of the validity of the registered mark and of the registration of the mark, of the owner's ownership of the mark, and of the owner's exclusive right to use the registered mark in commerce." 15 U.S.C. § 1057(b). The record indicates that Plaintiffs own valid trademarks of the trademarks asserted in this case, and they have federal trademark registrations for each of the asserted marks.¹³ Thus, Plaintiffs have established a prima facie showing of ownership. Defendant offers no evidence to demonstrate that Plaintiffs do not own the trademarks, and therefore the court concludes that Plaintiffs are the owners of these marks.

The trademarks must also be "valid." To establish validity, Plaintiffs must prove that the designation is inherently distinctive or that it has become distinctive by acquiring secondary meaning. *See Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 769 (1992); *Globalaw*, 452 F. Supp. 2d at 26. However, Plaintiffs' trademark registrations create a rebuttable presumption of "inherent distinctiveness or secondary meaning." Restatement (Third) of Unfair Competition § 13 cmt. a (1995). Additionally, the Lanham Act provides that if the trademark has been "in continuous use for five years subsequent to registration" then the marks become "incontestable," 15 U.S.C. § 1065, meaning the registration "shall be conclusive evidence of the validity of the registered mark," including as to whether it is distinctive or has a secondary meaning, 15 U.S.C. § 1115(b); *see also* Restatement (Third) of Unfair Competition § 13 cmt. a (1995). Plaintiffs

¹³ (PSMF ¶¶ 77 (trademark registration for "ASTM"), 78 (trademark registration for "ASTM International" and logo), 79 (trademark registration for ASTM logo), 123 (trademark registration for "National Fire Protection Association" and "NFPA"), 124 (trademark registration for NFPA logo), 126 (trademark registration for NEC logo), 149 (trademark registration for ASHRAE logo), 151 (trademark registration for additional ASHRAE logo)).

provided evidence that some of their trademarks have become incontestable and that they all are distinctive. (See PSMF ¶¶ 77, 78, 124, 125, 126, 150). Defendant offered no evidence to dispute the validity of the trademarks. Thus, Plaintiffs have sufficiently established their ownership of valid trademarks.

2. Defendant's Unauthorized Use in Commerce

Plaintiffs must also demonstrate that Defendant used their trademarks “in commerce.” 15 U.S.C. §§ 1114(1), 1125(a)(1). Under the Lanham Act, “[c]ommerce’ means all commerce which may be lawfully regulated by Congress.” 15 U.S.C. § 1127. Therefore, to satisfy this requirement, Plaintiffs need not demonstrate actual use or intended use in interstate commerce. See *United We Stand Am., Inc. v. United We Stand, Am. N.Y., Inc.*, 128 F.3d 86, 92 (2d Cir. 1997) (the commerce requirement “reflects Congress’s intent to legislate to the limits of its authority under the Commerce Clause, rather than to limit the Lanham Act to profit-seeking uses of a trademark”). Distribution on the Internet can satisfy the “use in commerce” requirement. See *Intermatic, Inc. v. Toebben*, 947 F. Supp. 1227, 1239 (N.D. Ill. 1996). Thus, Defendant’s online posting of the standards bearing Plaintiffs’ trademarks satisfies this requirement.

This use in commerce must further be “without the consent of the registrant.” 15 U.S.C. § 1114(1). It is undisputed that Plaintiffs did not authorize Defendant’s use of Plaintiffs’ trademarks in commerce. Defendant instead argues that its use was permitted under the “first sale doctrine,” which holds that a trademark owner cannot control what happens to its products after the first sale. However, the court finds this doctrine a poor fit here, where it is undisputed that Defendant did not redistribute the physical copies of Plaintiffs’ standards that it purchased but rather created reproductions through scanning and re-typing, with resultant errors and differences. See *Australian Gold, Inc. v. Hatfield*, 436 F.3d 1228, 1241 (10th Cir. 2006) (noting

that the first sale doctrine is appropriate only when the actor “does no more than stock, display, and resell a producer’s product under the producer’s trademark”); *Capitol Records, LLC v. DeRigi Inc.*, 934 F. Supp. 2d 640, 655 (S.D.N.Y. 2013) (in the copyright context, the first sale doctrine was “impossible” to apply because that defense is limited to when an actor distributes the original material item, not when she distributes reproductions).

Moreover, Defendant’s quality control standards in reproducing Plaintiffs’ standards were outside of Plaintiffs’ control and below that sufficient to deem the standards it distributed “genuine” products, meaning the first sale doctrine cannot protect Defendant’s conduct. *See Polymer Tech. Corp. v. Mimran*, 37 F.3d 74, 78 (2d Cir. 1994); *Shell Oil Co. v. Commercial Petroleum, Inc.*, 928 F.2d 104, 107 (4th Cir. 1991); *El Greco Leather Prods. Co. v. Shoe World*, 806 F.2d 392, 395 (2d Cir. 1986); *see also* 4 McCarthy on Trademarks and Unfair Competition § 25.42 (4th ed.). Although Defendant argues that there are no material differences between Plaintiffs’ standards and Defendant’s reproductions, Plaintiffs need not show that Defendant’s reproduced standards were defective, only that they were unable to exercise quality control. *See Zino Davidoff SA v. CVS Corp.*, 571 F.3d 238, 243 (2d Cir. 2009). The claim survives because “the interference with the trademark holder’s legitimate steps to control quality unreasonably subjects the trademark holder to the risk of injury to the reputation of its mark.” *Id.* Plaintiffs have established that Defendant’s quality control standards, including “double-keying” the standards, a process involving two separate individuals typing the same material and comparing the results to determine the existence of any errors, resulted in missing or inverted pages and typographical errors in numerical values or formulas. (ASTM PSMF ¶¶ 190, 214–15). Because the standards are therefore not “genuine,” the first sale doctrine does not apply, and Plaintiffs have established that Defendant used its trademarks in commerce without authorization.

3. Likelihood of Confusion

Next, the court must assess whether there is a substantial likelihood of consumer confusion. This hinges on whether “an appreciable number of ordinarily prudent customers are likely to be misled, or simply confused, as to the source” of the copied standards that Public Resource posted online. *Globalaw*, 452 F. Supp. 2d at 47.

Plaintiffs argue that consumers will be confused both in thinking that Plaintiffs authorized Defendant’s posting of the standards, and that Plaintiffs produced the PDF and HTML versions of the standards that Defendant posted. *See Am Ass’n for the Advancement of Science v. Hearst Corp.*, 498 F. Supp. 244, 258 (D.D.C. 1980) (noting that both are appropriate bases for a confusion argument). Courts in this Circuit consider approximately seven factors in assessing the likelihood of confusion, though none is individually determinative. *Globalaw*, 452 F. Supp. 2d at 48. They include: (1) the strength of the Plaintiffs’ marks; (2) the degree of similarity between the marks; (3) the proximity of the products; (4) evidence of actual confusion; (5) Defendant’s purpose or reciprocal good faith in adopting its own mark; (6) the quality of Defendant’s product; and (7) the sophistication of the buyers. *Id.* Several courts in other Circuits have determined that when a defendant uses an identical mark on a similar product, consideration of all the factors is not necessary. *See Int’l Cosmetics Exch., Inc. v. Gapardis Health & Beauty, Inc.*, 303 F.3d 1242, 1248-49 (11th Cir. 2002); *Wynn Oil Co. v. Thomas*, 839 F.2d 1183, 1190-91 (6th Cir. 1988).

Defendant does not dispute that Plaintiffs’ marks are “strong,” that Defendant used marks and logos that are identical to Plaintiffs’ marks and logos when it posted the Plaintiffs’ standards online, and that the standards it applied the marks and logos to were identical or nearly identical to Plaintiffs’. (PSMF ¶¶ 210–11; Def. Br. at 65). Moreover, it is undisputed that the standards

distributed by Plaintiffs and by Defendant were in close proximity, since Defendant offered the standards in the same market as Plaintiff—i.e., the Internet—as a free alternative to purchasing the standards from Plaintiffs directly. *See* Restatement (Third) of Unfair Competition § 21 cmt. j (1995) (“[T]he use of similar designations on goods that are used together, or that perform the same function, or that are of the same general class, is more likely to cause confusion than is a use in connection with goods used for different purposes, or in different contexts, or by different purchasers.”). It is also undisputed that Defendant intended for individuals to consider that the standards were identical. (PSMF ¶ 213).

Defendant argues that despite these undisputed facts, consumers would not be confused because it posts disclaimers that it claims “adequately informed consumers” so that “no reasonable consumer would mistake [its cover page] as part of the original document.” (Def. Reply at 28 (referring to the PDF disclaimer at ASTM ECF No. 118-12, Ex. 16)). Defendant also argues that the PDF versions it posted “look like scans of physical documents,” and that the “preamble for the .html standards informs reasonable consumers that Public Resource has provided the transcription.” (*Id.* (referring to the HTML disclaimer at ASTM ECF No. 118-13, Ex. 26)).¹⁴ Here, Defendant’s disclaimer on the PDF reads in full:

In order to promote public education and public safety, equal justice for all, a better informed citizenry, the rule of law, world trade and world peace, this legal document is hereby made available on a noncommercial basis, as it is the right of all humans to know and speak the laws that govern them.

(ASTM ECF No. 118-12, Ex. 16). The disclaimer on the HTML versions contains similar

¹⁴ Defendant cites to *Prestonettes, Inc. v. Coty*, 264 U.S. 359, 369 (1924), in support of its argument that a disclaimer is sufficient to inform consumers that it has repackaged or changed the original. The facts of that case do not support Defendant’s position, as the disclaimer in that case stated clearly that the distributor was not connected with the producer and that the producer’s product was merely a constituent part of the distributor’s new product. *Coty*, 264 U.S. at 367.

language. (ASTM ECF No. 118-13, Ex. 26). These disclaimers do not mention Defendant's creation of the reproductions, Plaintiffs' lack of association or authorization, or that they are even reproductions or transcriptions, and can hardly be called disclaimers at all. Moreover, Defendant's assertion that the PDFs "look like scans" offers no assistance to a consumer looking at the standard, as they would have no way to determine whether the Plaintiffs or Defendant created the scan. While Defendant has since adopted a more thorough disclaimer that includes information about Public Resource's retyping of the HTML versions and the possibility of errors (DSMF ¶ 169), it did not begin using that disclaimer until 2015, after the start of this litigation. (Decl. of Carl Malamud ¶ 31 (ASTM ECF No. 122-8)).

The parties have presented no evidence to establish the existence or non-existence of actual consumer confusion. While such evidence is not required, without it summary judgment on consumer confusion, and trademark infringement more generally, is a difficult call. However, the facts here present nearly as black-and-white a case as possible. A consumer in the market for one of Plaintiffs' voluntary consensus standards may encounter them on Plaintiffs' websites for purchase, or on Defendant's website for free download. Because Defendant has intentionally created a copy that is meant to appear identical, including use of Plaintiffs' trademarks, then that consumer may download that standard for free from Defendant without knowing that it is not created by the Plaintiffs and may contain missing pages or typographical errors leading to inaccurate values for measurements. In short, Plaintiffs have presented enough evidence for the court to conclude that there is no genuine dispute on the factual issue of whether consumer confusion is likely.

4. Defendant's Nominative Fair Use Defense

While Plaintiffs have successfully established Defendant's infringing use of their

trademarks, Defendant argues that its use of Plaintiffs' trademarks is "nominative fair use."

Under this defense, Defendant must demonstrate that its use of Plaintiffs' trademarks was necessary to describe their standards; that it only used as much of the marks as was reasonably necessary to identify the standards; and that it has not done anything to suggest sponsorship or endorsement by the Plaintiffs or to inaccurately describe the relationship between the parties' products. *See Rosetta Stone Ltd. v. Google, Inc.*, 676 F.3d 144, 154 (4th Cir. 2012). Nominative fair use by a defendant makes it "clear to consumers that the plaintiff, not the defendant, is the source of the trademarked product or service." *Century 21 Real Estate Corp. v. Lendingtree, Inc.*, 425 F.3d 211, 220 (3d Cir. 2005). Thus, if Defendant's use is nominative fair use, it would not create "confusion about the source of [the] defendant's product." *Tiffany (NJ) Inc. v. eBay Inc.*, 600 F.3d 93, 102 (2d Cir. 2010) (alteration in original). On this point, the parties argue past each other. Defendant believes no consumer would believe that Defendant, rather than Plaintiffs, was the source of the standards, and so its use is a fair use. Plaintiffs argue that Defendant's use cannot be fair precisely *because* consumers would believe that Plaintiffs were the source of the reproduced standards, which they are not. However, because the court has already determined that consumer confusion as to the source of the trademarked standards is likely, the nominative fair use defense is inapplicable and the court need not assess each of the *Rosetta Stone* factors listed above.

The court therefore finds that Defendant engaged in trademark infringement by its use of Plaintiffs' registered trademarks, and Plaintiffs' motion for summary judgment on their trademark claims is GRANTED and Defendant's cross-motion is DENIED.

IV. REMEDIES

Both ASTM Plaintiffs and AERA Plaintiffs seek a permanent injunction barring

Defendant from distributing, displaying, or creating derivative works from their copyrighted standards and, in the case of ASTM Plaintiffs, their trademarks, which this court has authority to grant under 17 U.S.C. § 502(a) (Copyright Act) and 15 U.S.C. § 1116 (Lanham Act). Plaintiffs must establish (1) irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for their injury; (3) that a remedy in equity is warranted after considering the balance of hardships; and (4) that the public interest would not be disserved by a permanent injunction. *See eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006).

A. Irreparable Injury

The ASTM Plaintiffs assert that they will face three separate irreparable injuries if Defendant is permitted to continue distribution of Plaintiffs' standards, including substantial declines in revenue that may cause their business models to change, the loss of the exclusive rights under the Copyright Act to exclude others from distributing, reproducing, or displaying their protected works, and the loss of control of the goodwill associated with their trademarks. AERA Plaintiffs similarly assert that they will face three separate irreparable injuries if Defendant is permitted to continue distribution of Plaintiffs' standards, including loss of business opportunities, the loss of the exclusive rights under the Copyright Act to exclude others from distributing, reproducing, or displaying their protected works, and the adverse effect on Plaintiffs' efforts to create further standards.

It is well established that the threat of continuing copyright infringement justifies granting a permanent injunction. *See Walt Disney Co. v. Powell*, 897 F.2d 565, 567 (D.C. Cir. 1990) ("When a [] plaintiff has established a threat of continuing infringement, he is entitled to an injunction."); *Hanley-Wood LLC v. Hanley Wood LLC*, 783 F. Supp. 2d 147, 151 (D.D.C. 2011); *Breaking the Chain Found. v. Capital Educ. Support, Inc.*, 589 F. Supp. 2d 25, 30

(D.D.C. 2008). While a court should not automatically issue an injunction after it finds there was past copyright or trademark infringement, here Plaintiffs’ alleged irreparable injury is not the past infringement but the threat of future infringement. Defendant has not provided any assurances that it would cease posting of Plaintiffs’ standards—indeed, it is undisputed that during the course of this litigation, Public Resource posted online versions of the ASTM Plaintiffs’ other standards not involved in this litigation. (PSMF ¶ 235). Moreover, Defendant’s counsel at oral argument admitted that Defendant would post the AERA Plaintiffs’ 2014 Standards if they were incorporated by reference into federal regulations in the future. (Tr. of Motions Hearing at 75:24–76:2). The court thus determines that the continued threat of infringement is sufficient to weigh in favor of an injunction.

B. Adequacy of Monetary Damages

Plaintiffs argue that because damages here are difficult to quantify and Defendant may be unable to pay damages, then legal remedies are inadequate. *See Fox Television Stations, Inc. v. FilmOn X LLC*, 966 F. Supp. 2d. 30, 50 (D.D.C. 2013). The evidence shows that while the Plaintiffs’ standards were accessed thousands of times on Defendant’s website, Defendant does not track information that would be helpful in calculating damages, such as how many of those accesses actually led to downloads, and whether those downloads were in lieu of purchases. Moreover, Defendant did not dispute that it has “extremely limited financial resources available to pay any damages award” and that in 2014 it “generated under \$100,000 in operating income and had \$248,000 in total net assets.” (ASTM PSMF ¶¶ 272–73). Given that the Copyright Act provides for statutory damages ranging from \$750 to \$30,000 for each of the standards at issue in the overall case, or even up to \$150,000 per infringement if Plaintiffs were to later prove that infringement was committed willfully, Defendant’s potential inability to pay is surely a factor

weighing towards equitable relief. *See* 17 U.S.C. § 504(c)(1)–(2).

C. Balance of Hardships & Public Interest

The court must weigh the likely harms faced by Plaintiffs described above with any harms faced by Defendant if an injunction is imposed. Here, Defendant’s CEO Carl Malamud was asked in his ASTM deposition what financial impact an injunction barring posting of the standards would have on Public Resource, and he responded “probably none.” (Malamud Dep. at 219:22–220:4 (Ex. 3 to Rubel Decl. (ASTM ECF No. 118-12))). The only harm Mr. Malamud identified was that “one hates to have wasted that [] effort” that went into posting the standards online. (*Id.*). Without evidence of any additional harms, this factor weighs strongly in favor of an injunction.

Additionally, the public must not be disserved by the issuance of an injunction. Here, the public interest is served by the policy interests that underlie the Copyright Act itself, namely the protection of financial incentives for the continued creation of valuable works, and the continued value in maintaining the public-private system in place in the U.S. to ensure continued development of technical standards.

Taken together, the court finds that injunctive relief is appropriate and that Defendant should be permanently barred from violating any of Plaintiffs’ exclusive copyrights, including distributing, displaying, reproducing, or creating derivative works in the nine standards on which ASTM Plaintiffs moved for summary judgment and AERA Plaintiffs’ 1999 Standards, as well as barred from any use of ASTM Plaintiffs’ trademarks in connection with the posting of these standards online or elsewhere.

V. CONCLUSION

For the reasons set forth above, ASTM Plaintiffs’ Motion is GRANTED, AERA

Plaintiffs' Motion is GRANTED IN PART and DENIED IN PART, and Defendant's Cross-Motions are DENIED.

Date: February 2, 2017

Tanya S. Chutkan

TANYA S. CHUTKAN

United States District Judge

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR TESTING
AND MATERIALS, *et al.*,

Plaintiffs,

v.

PUBLIC.RESOURCE.ORG, INC.,

Defendant.

Case No. 13-cv-1215 (TSC)

ORDER

Upon consideration of the parties' motions, and for the reasons set forth in the court's Memorandum Opinion, Plaintiffs' motion is GRANTED and Defendant's motion is DENIED.

It is hereby ORDERED that Defendant is permanently enjoined from all unauthorized use, including through reproduction, display, distribution, or creation of derivative works, of the following nine standards: ASTM D86-07, ASTM D975-07, ASTM D396-98, ASTM D1217-93(98), NFPA National Electrical Code, 2011 ed. and 2014 ed., ASHRAE Standard 90.1, 2004 ed., 2007 ed., and 2010 ed. It is FURTHER ORDERED that Defendant is permanently enjoined from all unauthorized use of Plaintiffs' registered trademarks.

Defendant is FURTHER ORDERED to remove all versions of these nine standards from its website and any other website within its possession, custody, or control within five days.

Date: February 2, 2017

Tanya S. Chutkan

TANYA S. CHUTKAN

United States District Judge

JA2114

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

AMERICAN SOCIETY FOR TESTING AND
MATERIALS d/b/a ASTM INTERNATIONAL;

NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and

AMERICAN SOCIETY OF HEATING,
REFRIGERATING, AND AIR CONDITIONING
ENGINEERS,

Plaintiffs/Counter-defendants,

v.

PUBLIC.RESOURCE.ORG, INC.,

Defendant/Counterclaimant.

Case No. 1:13-cv-01215-TSC-DAR

**NOTICE OF APPEAL BY
DEFENDANT-COUNTERCLAIMANT
PUBLIC.RESOURCE.ORG, INC.**

Action Filed: August 6, 2013

Pursuant to 28 U.S.C. § 1292(a)(1), Defendant and Counterclaimant Public.Resource.Org, Inc. hereby gives notice of its appeal to the United States Court of Appeals for the District of Columbia Circuit from the order of February 2, 2017, Dkt. no. 176, permanently enjoining Public.Resource.Org and granting Plaintiffs' Motion for Summary Judgment and for a Permanent Injunction, pursuant to this Court's decision in the memorandum opinion of the same date, Dkt. no. 175.

Dated: February 15, 2017

Respectfully submitted,

/s/ Andrew P. Bridges

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing was electronically filed with the Clerk of the Court for the District of Columbia and served on all counsel of record via the CM/ECF system on February 15, 2017.

/s/ Andrew P. Bridges

Andrew P. Bridges

Defendant.

AMENDED ORDER

Moreover, this injunction does not apply to third-party standards posted by Public Resource that merely reference Plaintiffs or Plaintiffs' works without reproducing Plaintiffs' works in whole or substantial part.

Date: April 3, 2017

Tanya S. Chutkan

TANYA S. CHUTKAN

United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN SOCIETY FOR TESTING AND
MATERIALS d/b/a ASTM INTERNATIONAL;

NATIONAL FIRE PROTECTION
ASSOCIATION, INC.; and

AMERICAN SOCIETY OF HEATING,
REFRIGERATING, AND AIR CONDITIONING
ENGINEERS,

Plaintiffs/Counter-defendants,

v.

PUBLIC.RESOURCE.ORG, INC.,

Defendant/Counterclaimant.

Case No. 1:13-cv-01215-TSC-DAR

**AMENDED NOTICE OF APPEAL BY
DEFENDANT-COUNTERCLAIMANT
PUBLIC.RESOURCE.ORG, INC.**

Action Filed: August 6, 2013

Pursuant to 28 U.S.C. § 1292(a)(1), Defendant and Counterclaimant Public.Resource.Org, Inc. hereby gives *amended* notice of its appeal to the United States Court of Appeals for the District of Columbia Circuit from the Order of February 2, 2017, Dkt. no. 176, to reflect and include the Court's Amended Order issued April 3, 2017, Dkt. no. 182, permanently enjoining Public.Resource.Org and granting Plaintiffs' Motion for Summary Judgment and for a Permanent Injunction, pursuant to this Court's decision in the memorandum opinion of February 2, 2017, Dkt. no. 175.

Dated: April 6, 2017

Respectfully submitted,

/s/ Andrew P. Bridges

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing was electronically filed with the Clerk of the Court for the District of Columbia and served on all counsel of record via the CM/ECF system on April 6, 2017.

/s/ Andrew P. Bridges

Andrew P. Bridges

USCA Case #17-7039

Document #1715850

Filed: 01/31/2018

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APPEAL,CLOSED,STAYED,TYPE-E

**U.S. District Court
District of Columbia (Washington, DC)
CIVIL DOCKET FOR CASE #: 1:14-cv-00857-TSC**

AMERICAN EDUCATIONAL RESEARCH
ASSOCIATION, INC. et al v. PUBLIC.RESOURCE.ORG,
INC.

Assigned to: Judge Tanya S. Chutkan

Case: [1:13-cv-01215-TSC](#)

Case in other court: USCA, 17-07039

Cause: 17:101 Copyright Infringement

Date Filed: 05/23/2014

Date Terminated: 07/10/2017

Jury Demand: Defendant

Nature of Suit: 820 Copyright

Jurisdiction: Federal Question

Plaintiff

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JA2123

USCA Case #17-7039

Document #1715850

Filed: 01/31/2018

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Plaintiff

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(See above for address)
TERMINATED: 03/24/2017

Jonathan P. Labukas
(See above for address)
TERMINATED: 03/24/2017

Kathleen Cooney-Porter
(See above for address)
TERMINATED: 01/21/2016

Nikia L. Gray
(See above for address)
TERMINATED: 03/24/2017
PRO HAC VICE

Plaintiff

**NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION,
INC.**

represented by **Clifton Scott Elgarten**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Jonathan Hudis
(See above for address)

JA2124

TERMINATED: 03/24/2017

Jonathan P. Labukas

(See above for address)

TERMINATED: 03/24/2017

Kathleen Cooney-Porter

(See above for address)

TERMINATED: 01/21/2016

Nikia L. Gray

(See above for address)

TERMINATED: 03/24/2017

PRO HAC VICE

V.

Defendant

PUBLIC.RESOURCE.ORG, INC.

represented by **Andrew Phillip Bridges**
FENWICK & WEST, LLP
555 California Street
Suite 1200
San Francisco, CA 94104
(415) 875-2389
Email: abridges@fenwick.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Mitchell L. Stoltz
ELECTRONIC FRONTIER
FOUNDATION
815 Eddy Street
San Francisco, CA 94109
(415) 436-9333
Fax: (415) 436-9993
Email: mitch@eff.org
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Sebastian E. Kaplan
FENWICK & WEST LLP
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12th Floor
San Francisco, CA 94104
(415) 875-2300
LEAD ATTORNEY
PRO HAC VICE
ATTORNEY TO BE NOTICED

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Corynne McSherry
ELECTRONIC FRONTIER
FOUNDATION
815 Eddy Street
San Francisco, CA 94109
(415) 436-9333
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David Elliot Halperin
1530 P Street, NW
Washington, DC 20005
(202) 905-3434
Email: davidhalperindc@gmail.com
ATTORNEY TO BE NOTICED

Matthew B. Becker
FENWICK & WEST LLP
801 California Street
Mountain View, CA 94041
(650) 335-7930
Email: mbecker@fenwick.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Amicus

**REPORTERS COMMITTEE FOR
FREEDOM OF THE PRESS**

represented by **Bruce D. Brown**
REPORTERS COMMITTEE FOR
FREEDOM OF THE PRESS
1156 15th St. NW
Suite 1250
Washington, DC 20005
(202) 795-9301
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LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Amicus

LAW SCHOLARS

represented by **Catherine R. Gellis**
P.O. Box 2477
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Email: cathy@cgcounsel.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

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Amicus**PUBLIC KNOWLEDGE**

represented by **Charles Duan**
PUBLIC KNOWLEDGE
1818 N Street, NW
Suite 410
Washington, DC 20036
(202) 861-0020 x 119
Email: cduan@publicknowledge.org
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Amicus**SINA BAHRAM**

represented by **Jeffrey T. Pearlman**
MILLS LEGAL CLINIC AT
STANFORD LAW SCHOOL
559 Nathan Abbott Way.
Stanford, CA 94305
(650) 497-9443
Fax: (650) 723-4426
Email: jef@law.stanford.edu
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Intervenor

**AMERICAN SOCIETY FOR
TESTING AND MATERIALS**
100 BARR HARBOR DRIVE
WEST CONSHOHOCKEN, PA 19428

represented by **J. Kevin Fee**
MORGAN, LEWIS & BOCKUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, DC 20004
(202) 739-5353
Fax: (202) 239-3001
Email: jkfee@morganlewis.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Intervenor

**NATIONAL FIRE PROTECTION
ASSOCIATION, INC.**

represented by **Anjan Choudhury**
MUNGER, TOLLES & OLSON LLP
350 South Grand Avenue
50th Floor
Los Angeles, CA 90071
(212) 683-9107
Fax: (213) 683-5107
Email: anjan.choudhury@mto.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

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Intervenor

**AMERICAN SOCIETY OF
HEATING, REFRIGERATING,
AND AIR-CONDITIONING
ENGINEERS, INC.**

represented by **Joseph R. Wetzel**
KING & SPALDING, LLP
101 2nd Street
Suite 2300
San Francisco, CA 94105
(415) 318-1200
Fax: (415) 318-1300
Email: jwetzel@kslaw.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Counter Claimant

PUBLIC.RESOURCE.ORG, INC.

represented by **Andrew Phillip Bridges**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Mitchell L. Stoltz
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Corynne McSherry
(See above for address)
PRO HAC VICE
ATTORNEY TO BE NOTICED

David Elliot Halperin
(See above for address)
ATTORNEY TO BE NOTICED

Matthew B. Becker
(See above for address)
ATTORNEY TO BE NOTICED

V.

Counter Defendant

**AMERICAN EDUCATIONAL
RESEARCH ASSOCIATION, INC.**

represented by **Clifton Scott Elgarten**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Jonathan Hudis
(See above for address)
TERMINATED: 03/24/2017

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Filed: 01/31/2018 Page 370 of 573

Jonathan P. Labukas
(See above for address)
TERMINATED: 03/24/2017

Kathleen Cooney-Porter
(See above for address)
TERMINATED: 01/21/2016

Nikia L. Gray
(See above for address)
TERMINATED: 03/24/2017
PRO HAC VICE

Counter Defendant

**AMERICAN PSYCHOLOGICAL
ASSOCIATION, INC.**

represented by **Clifton Scott Elgarten**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Jonathan Hudis
(See above for address)
TERMINATED: 03/24/2017

Jonathan P. Labukas
(See above for address)
TERMINATED: 03/24/2017

Kathleen Cooney-Porter
(See above for address)
TERMINATED: 01/21/2016

Nikia L. Gray
(See above for address)
TERMINATED: 03/24/2017
PRO HAC VICE

Counter Defendant

**NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION,
INC.**

represented by **Clifton Scott Elgarten**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Jonathan Hudis
(See above for address)
TERMINATED: 03/24/2017

Jonathan P. Labukas
(See above for address)
TERMINATED: 03/24/2017

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Kathleen Cooney-Porter

(See above for address)

*TERMINATED: 01/21/2016***Nikia L. Gray**

(See above for address)

*TERMINATED: 03/24/2017**PRO HAC VICE*

Date Filed	#	Docket Text
05/23/2014	<u>1</u>	COMPLAINT <i>filed</i> against PUBLIC.RESOURCE.ORG, INC. (Filing fee \$ 400 receipt number 0090-3725541) filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC.. (Attachments: # <u>1</u> Exhibit A, # <u>2</u> Exhibit B, # <u>3</u> Corporate Disclosure Stmt, # <u>4</u> Civil Cover Sheet, # <u>5</u> Summons, # <u>6</u> Report to Register of Copyrights)(Hudis, Jonathan) (Entered: 05/23/2014)
05/23/2014		Case Assigned to Judge Gladys Kessler. (kb) (Entered: 05/27/2014)
05/27/2014	<u>2</u>	SUMMONS (1) Issued Electronically as to PUBLIC.RESOURCE.ORG, INC. (Attachments: # <u>1</u> Consent Form, # <u>2</u> Notice of Consent)(kb) (Entered: 05/27/2014)
05/28/2014	<u>3</u>	Case randomly reassigned to Judge Christopher R. Cooper. Judge Gladys Kessler no longer assigned to the case. (gt,) (Entered: 05/28/2014)
06/09/2014	<u>4</u>	NOTICE of Appearance by Kathleen Cooney-Porter on behalf of AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Cooney-Porter, Kathleen) (Entered: 06/09/2014)
06/10/2014	<u>5</u>	RETURN OF SERVICE/AFFIDAVIT of Summons and Complaint Executed. PUBLIC.RESOURCE.ORG, INC. served on 6/2/2014, answer due 6/23/2014 (Hudis, Jonathan) (Entered: 06/10/2014)
07/01/2014		MINUTE ORDER: Upon review of the record, it appears that the time for defendant Public.Resource.Org, Inc. to answer or otherwise respond to plaintiffs' complaint has expired. Plaintiffs are therefore ORDERED to show cause by July 15, 2014, as to why they have failed to move for default judgment and why the case should not be dismissed for want of prosecution. Signed by Judge Christopher R. Cooper on 7/1/2014. (lccrc2,) (Entered: 07/01/2014)
07/07/2014	<u>6</u>	NOTICE of Appearance by David Elliot Halperin on behalf of PUBLIC.RESOURCE.ORG, INC. (Halperin, David) (Entered: 07/07/2014)
07/07/2014	<u>7</u>	

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		NOTICE of Appearance by Mitchell L. Stoltz on behalf of PUBLIC.RESOURCE.ORG, INC. (Stoltz, Mitchell) (Entered: 07/07/2014)
07/07/2014	<u>8</u>	LCvR 7.1 CERTIFICATE OF DISCLOSURE of Corporate Affiliations and Financial Interests by PUBLIC.RESOURCE.ORG, INC. (Stoltz, Mitchell) (Entered: 07/07/2014)
07/07/2014	<u>9</u>	Unopposed MOTION for Extension of Time to File Answer to Complaint by PUBLIC.RESOURCE.ORG, INC. (Attachments: # <u>1</u> Text of Proposed Order) (Stoltz, Mitchell) (Entered: 07/07/2014)
07/08/2014		MINUTE ORDER granting <u>9</u> Unopposed Motion for Extension of Time. Defendant shall file its response to the Complaint on or before July 14, 2014. The parties are reminded that the Court will only grant extensions of time upon the filing of a motion. Signed by Judge Christopher R. Cooper on 7/8/2014. (lccrc2,) (Entered: 07/08/2014)
07/08/2014	<u>10</u>	NOTICE of Appearance by Andrew Phillip Bridges on behalf of PUBLIC.RESOURCE.ORG, INC. (Bridges, Andrew) (Entered: 07/08/2014)
07/09/2014	<u>11</u>	RESPONSE TO ORDER TO SHOW CAUSE by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. as noted in Court's Minute Order of July 1, 2014. (Hudis, Jonathan) (Entered: 07/09/2014)
07/14/2014	<u>12</u>	ANSWER to Complaint with Jury Demand , COUNTERCLAIM FOR DECLARATORY RELIEF against All Plaintiffs by PUBLIC.RESOURCE.ORG, INC..(Bridges, Andrew) (Entered: 07/14/2014)
07/23/2014	<u>13</u>	Unopposed MOTION for Extension of Time to File Response/Reply to Defendant's Counterclaim by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # <u>1</u> Text of Proposed Order)(Hudis, Jonathan) (Entered: 07/23/2014)
07/23/2014		MINUTE ORDER granting <u>13</u> Plaintiffs' Unopposed Motion for Extension of Time. Plaintiffs shall file their answer or other response to Defendant's Counterclaim on or before August 25, 2014. Signed by Judge Christopher R. Cooper on 7/23/2014. (lccrc2,) (Entered: 07/23/2014)
08/21/2014	<u>14</u>	Plaintiffs' ANSWER to <u>12</u> Answer to Complaint, COUNTERCLAIM filed by Defendant for Declaratory Relief by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. Related document: <u>12</u> Answer to Complaint, COUNTERCLAIM filed by PUBLIC.RESOURCE.ORG, INC..(Hudis, Jonathan) (Entered: 08/21/2014)
08/21/2014	<u>15</u>	MOTION to Strike <u>12</u> Answer to Complaint, COUNTERCLAIM re Defendant's Jury Demand by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION,

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		INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Text of Proposed Order Striking Defendant's Jury Demand) (Hudis, Jonathan) (Entered: 08/21/2014)
09/08/2014	16	Memorandum in opposition to re 15 MOTION to Strike 12 Answer to Complaint, COUNTERCLAIM <i>re Defendant's Jury Demand</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # 1 Text of Proposed Order) (Stoltz, Mitchell) (Entered: 09/08/2014)
09/18/2014	17	REPLY to opposition to motion re 15 MOTION to Strike 12 Answer to Complaint, COUNTERCLAIM <i>re Defendant's Jury Demand</i> filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Hudis, Jonathan) (Entered: 09/18/2014)
09/18/2014	18	ORDER FOR INITIAL SCHEDULING CONFERENCE: The above-captioned case has been assigned to this Judge for resolution. It is hereby ORDERED that the Initial Scheduling Conference be set for Thursday, October 16, 2014 at 2:00 PM in Courtroom 27A. In accordance with Rule 16.3(a) of the Local Civil Rules and Federal Rule of Civil Procedure 26(f)(1), counsel (including any nonprisoner pro se party) shall confer at least 21 days prior to the date of the Initial Scheduling Conference to discuss the matters outlined in Local CivilRule 16.3(c). Pursuant to Local Civil rule 16.3(d) and Federal Rule of Civil Procedure 26(f)(2), counsel shall submit to the Court no later than 14 days following their meeting i.e., no fewer than 7 days prior to the date of the Initial Scheduling Conference a joint Report that, among otherthings: (1) outlines a detailed discovery plan as described in Federal Rule of Civil Procedure 26(f)(3); (2) addresses all topics listed in Local Civil rule 16.3(c); and (3) sets forth a proposed scheduling order. See LCvR 16.3(d). Counsel are also directed to include in their Report a brief statement of the case and the statutory basis for all causes of action and defenses. Parties are to communicate with the Court by motion, opposition, reply, or notice, not byletter. All inquiries concerning the status or scheduling of any pending matter shall be directed to the Courtroom Deputy Clerk, Ms. Terri Robinson, (202) 354-3179, rather than to chambers. If Ms. Robinson is unavailable, such inquiries shall be directed to the staff person in the Clerks Office who has been designated as her substitute. Chambers personnel will not handle questions relating to the status or scheduling of pending matters, nor will chambers provide legal advice of any kind. In an emergency, however, chambers can be contacted at (202) 354-3480.(SEE ORDER FOR FULL DETAILS). Signed by Judge Christopher R. Cooper on 9/18/2014. (tcr) (Entered: 09/18/2014)
10/06/2014	19	MOTION for Leave to Appear Pro Hac Vice :Attorney Name- Corynne McSherry, :Firm- Electronic Frontier Foundation, :Address- 815 Eddy Street, San Francisco, CA 94109. Phone No. - (415) 436-9333. Fax No. - (415) 436-9993 Filing fee \$ 100, receipt number 0090-3862145. Fee Status: Fee Paid. by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Affidavit of Corynne McSherry, # 2 Text of Proposed Order)(Stoltz, Mitchell) (Entered: 10/06/2014)
10/06/2014		

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		MINUTE ORDER granting 19 Motion for Leave to Appear Pro Hac Vice. Signed by Judge Christopher R. Cooper on 10/6/2014. (lccrc2,) (Entered: 10/06/2014)
10/09/2014	20	MEET AND CONFER STATEMENT. (Hudis, Jonathan) (Entered: 10/09/2014)
10/09/2014	21	NOTICE of filing of Proposed Order Regarding Confidentiality of Discovery Material and Inadvertent Disclosure of Privileged Material filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Hudis, Jonathan) (Entered: 10/09/2014)
10/16/2014		Minute Entry for proceedings held before Judge Christopher R. Cooper: Initial Scheduling Conference held and concluded on 10/16/2014. Court to issue Scheduling Order accordingly. (Court Reporter Barbara DeVico) (tcr) (Entered: 10/16/2014)
10/16/2014	22	SCHEDULING ORDER: Upon consideration of the parties' Joint Meet and Confer Statement 20 , it is hereby ORDERED that the parties shall abide by the schedule in the attached Order. The deadline for the close of all discovery is July 13, 2015. A Post Discovery Status Conference is set for July 15, 2015 at 2:00 PM in Courtroom 27A before Judge Christopher R. Cooper. Signed by Judge Christopher R. Cooper on 10/16/2014. (lccrc2,) (Entered: 10/16/2014)
10/17/2014	23	Case reassigned to Judge Tanya S. Chutkan as related to CA 13-1215. Judge Christopher R. Cooper no longer assigned to the case. (ztnr,) (Entered: 10/20/2014)
10/29/2014	24	ORDER: Entering the joint 21 Protective Order submitted by the parties. Signed by Judge Tanya S. Chutkan on 10/29/2014. (lctsc2) (Entered: 10/29/2014)
11/21/2014		MINUTE ORDER: Setting Hearing on 15 MOTION to Strike Defendant's Jury Demand. Motion Hearing set for 12/4/2014 11:30 AM in Courtroom 2 before Judge Tanya S. Chutkan. Signed by Judge Tanya S. Chutkan on 11/21/2014. (lctsc2) (Entered: 11/21/2014)
12/04/2014		Minute Entry for proceedings held before Judge Tanya S. Chutkan: Motion Hearing held on 12/4/2014 re 15 MOTION to Strike Defendant's Jury Demand filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC. and NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. Oral argument heard, and motion taken under advisement.(Court Reporter: Janice Dickman.) (tj) (Entered: 12/04/2014)
12/11/2014	25	MOTION to Compel filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Declaration of Jonathan Hudis, # 2 Exhibit A to Hudis Decl, # 3 Exhibit B to Hudis Decl, # 4 Exhibit C to Hudis Decl, # 5 Exhibit D to Hudis Decl, # 6 Exhibit E to Hudis Decl, # 7 Exhibit F to Hudis Decl, # 8

		Exhibit G to Hudis Decl, # 9 Exhibit H to Hudis Decl, # 10 Exhibit I to Hudis Decl, # 11 Exhibit J to Hudis Decl, # 12 Exhibit K to Hudis Decl, # 13 Exhibit L to Hudis Decl, # 14 Exhibit M to Hudis Decl, # 15 Exhibit N to Hudis Decl, # 16 Exhibit O to Hudis Decl, # 17 Exhibit P to Hudis Decl, # 18 Exhibit Q to Hudis Decl, # 19 Exhibit R to Hudis Decl, # 20 Text of Proposed Order) (Hudis, Jonathan) (Entered: 12/11/2014)
12/12/2014		MINUTE ORDER: Denying without prejudice 25 Plaintiffs' Motion to Compel for failing to comply with paragraph 3 of the Court's Scheduling Order 22 requiring a notice to the Court and a joint telephone call to chambers over discovery disputes. Signed by Judge Tanya S. Chutkan on 12/12/14. (DJS) (Entered: 12/12/2014)
12/12/2014		MINUTE ORDER OF REFERRAL: The Court has determined that this action should be referred to Magistrate Judge Deborah A. Robinson for all issues related to DISCOVERY. The Court finds that because a similar case with the same defendant has already been referred to Judge Robinson for discovery purposes, the interests of judicial efficiency and economy will be served by Judge Robinson handling both matters. The parties are reminded, pursuant to LCvR 73.1, that this action may be referred for all purposes, including trial, upon the filing of an executed notice of consent by all parties. Consent of the District Court Judge is not necessary. Accordingly, it is hereby ORDERED that this action is referred to Magistrate Judge Deborah A. Robinson for discovery only, beginning immediately; and it is FURTHER ORDERED that any future filings related to discovery in this action shall have the initials of Judge Tanya Chutkan and Magistrate Judge Deborah A. Robinson following the case number in the caption. Signed by Judge Tanya S. Chutkan on 12/12/14. (DJS) (Entered: 12/12/2014)
12/12/2014	26	CASE REFERRED to Magistrate Judge Deborah A. Robinson for Discovery. (md,) (Entered: 12/15/2014)
12/15/2014	27	Amended MOTION to Compel discovery, privilege log, and further initial disclosures <i>filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Declaration of Jonathan Hudis, # 2 Exhibit A to Hudis Declaration, # 3 Exhibit B to Hudis Declaration, # 4 Exhibit C to Hudis Declaration, # 5 Exhibit D to Hudis Declaration, # 6 Exhibit E to Hudis Declaration, # 7 Exhibit F to Hudis Declaration, # 8 Exhibit G to Hudis Declaration, # 9 Exhibit H to Hudis Declaration, # 10 Exhibit I to Hudis Declaration, # 11 Exhibit J to Hudis Declaration, # 12 Exhibit K to Hudis Declaration, # 13 Exhibit L to Hudis Declaration, # 14 Exhibit M to Hudis Declaration, # 15 Exhibit N to Hudis Declaration, # 16 Exhibit O to Hudis Declaration, # 17 Exhibit P to Hudis Declaration, # 18 Exhibit Q to Hudis Declaration, # 19 Exhibit R to Hudis Declaration, # 20 Text of Proposed Order)(Hudis, Jonathan) Modified on 12/16/2014 (td,). (Entered: 12/15/2014)
12/16/2014		Set/Reset Hearings: Motion Hearing on Plaintiffs' Amended Motion to Compel Discovery, Privilege Log, and Further Initial Disclosures (Document No. 27) is

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		scheduled for 11:00 AM on Thursday, 1/15/2015 in Courtroom 4 before Magistrate Judge Deborah A. Robinson. (SRH) (Entered: 12/16/2014)
12/24/2014	<u>28</u>	Consent MOTION for Extension of Time to <i>Oppose Plaintiffs' Motion to Compel</i> by PUBLIC.RESOURCE.ORG, INC. (Attachments: # <u>1</u> Text of Proposed Order)(Bridges, Andrew) (Entered: 12/24/2014)
12/31/2014		MINUTE ORDER: It is hereby ORDERED that Defendant/Counterclaimant's Consent Motion for Extension of Time to Oppose Plaintiffs/Counterdefendants' Amended Motion to Compel Discovery, Privilege Log, and Further Initial Disclosures (Document No. 28) is GRANTED. It is FURTHER ORDERED that Defendant-counterclaimant shall file its opposition to Plaintiffs' Amended Motion to Compel Discovery, Privilege Log, and Further Initial Disclosures (Document No. 27) by no later than 6 p.m. on January 5, 2015. Signed by Magistrate Judge Deborah A. Robinson on December 31, 2014. (SRH) (Entered: 12/31/2014)
01/05/2015	<u>29</u>	Memorandum in opposition to re <u>27</u> Amended MOTION to Compel <i>filed</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # <u>1</u> Declaration of Andrew P. Bridges in Support of Defendant-Counterclaimant Public.Resource.Org, Inc.'s Opposition to Plaintiffs-Counterdefendants' Amended Motion to Compel, # <u>2</u> Exhibit 1 to Declaration of Andrew P. Bridges, # <u>3</u> Exhibit 2 to Declaration of Andrew P. Bridges, # <u>4</u> Exhibit 3 to Declaration of Andrew P. Bridges, # <u>5</u> Exhibit 4 to Declaration of Andrew P. Bridges, # <u>6</u> Exhibit 5 to Declaration of Andrew P. Bridges, # <u>7</u> Exhibit 6 to Declaration of Andrew P. Bridges, # <u>8</u> Exhibit 7 to Declaration of Andrew P. Bridges)(Bridges, Andrew) (Entered: 01/05/2015)
01/12/2015	<u>30</u>	REPLY to opposition to motion re <u>27</u> Amended MOTION to Compel <i>filed on December 15, 2014</i> , filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # <u>1</u> Declaration in Reply of Jonathan Hudis, # <u>2</u> Exhibit S to Hudis Reply Decl, # <u>3</u> Exhibit T to Hudis Reply Decl, # <u>4</u> Exhibit U to Hudis Reply Decl, # <u>5</u> Exhibit V to Hudis Reply Decl, # <u>6</u> Exhibit W to Hudis Reply Decl, # <u>7</u> Exhibit X to Hudis Reply Decl, # <u>8</u> Exhibit Y to Hudis Reply Decl, # <u>9</u> Exhibit Z to Hudis Reply Decl, # <u>10</u> Exhibit AA to Hudis Reply Decl, # <u>11</u> Exhibit BB to Hudis Reply Decl, # <u>12</u> Exhibit CC to Hudis Reply Decl, # <u>13</u> Exhibit DD to Hudis Reply Decl, # <u>14</u> Exhibit EE to Hudis Reply Decl, # <u>15</u> Text of Proposed Order -Revised)(Hudis, Jonathan) (Entered: 01/12/2015)
01/12/2015	<u>31</u>	MOTION for Leave to Appear Pro Hac Vice :Attorney Name- Matthew B. Becker, :Firm- Fenwick & West LLP, :Address- 801 California Street, Mountain View, CA 94041. Phone No. - (650) 335-7930. Fax No. - (650) 938-5200 <i>Motion to Admit Matthew B. Becker Pro Hac Vice</i> Filing fee \$ 100, receipt number 0090-3960268. Fee Status: Fee Paid. by PUBLIC.RESOURCE.ORG, INC. (Attachments: # <u>1</u> Declaration, # <u>2</u> Text of Proposed Order)(Bridges, Andrew) (Entered: 01/12/2015)
01/15/2015		Set/Reset Hearings: Motion Hearing on Plaintiffs' Amended Motion to Compel Discovery, Privilege Log, and Further Initial Disclosures (Document No. 27) is

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		rescheduled to 1/22/2015 09:30 AM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. (zcmm,) (Entered: 01/15/2015)
01/16/2015	32	NOTICE of Change of Address by Jonathan Hudis (Hudis, Jonathan) (Entered: 01/16/2015)
01/22/2015		MINUTE ORDER: It is hereby ORDERED that Defendant's 31 Motion for Leave to Appear Pro Hac Vice is GRANTED. Matthew B. Becker is hereby admitted pro hac vice to appear and participate as co-counsel in the above-referenced action. Signed by Magistrate Judge Deborah A. Robinson on 1/22/15. (zcmm,) (Entered: 01/22/2015)
01/22/2015		Minute Entry for proceedings held before Magistrate Judge Deborah A. Robinson: Motion Hearing held on 1/22/2015 re 27 Amended MOTION to Compel filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. Defendant shall file any motion to consolidate this and the related case (no. 13-cv-01215) for discovery purposes by no later than 1/29/2015. The court will take the pending motion 27 Plaintiffs' Amended Motion to Compel under advisement. (Court Reporter Bowles Reporting Service)(FTR Time Frame: 9:47:06 - 10:33:23 - 10:42:48 - 11:38:18, Ctrm 4) (zcmm,) (Entered: 01/22/2015)
01/29/2015	33	WITHDRAWN PURSUANT TO ENTRY NO.: 41 MOTION to Consolidate Cases <i>Defendant-Counterclaim Public.Resource.Org, Inc.'s Motion to Consolidate for the Purposes of Discovery</i> by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Text of Proposed Order [Proposed] Order Granting Defendant's Motion to Consolidate for Purposes of Discovery (Dkt. No. 33))(Bridges, Andrew) Modified on 3/2/2015 (td,). (Entered: 01/29/2015)
01/29/2015	34	AFFIDAVIT re 33 MOTION to Consolidate Cases <i>Defendant-Counterclaim Public.Resource.Org, Inc.'s Motion to Consolidate for the Purposes of Discovery Declaration of Matthew B. Becker in Support of Defendant-Counterclaim Public.Resource.Org, Inc.'s Motion to Consolidate for the Purposes of Discovery (Dkt. 33)</i> by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # 1 Exhibit 1)(Bridges, Andrew) (Entered: 01/29/2015)
02/02/2015	35	MEMORANDUM AND OPINION. Signed by Judge Tanya S. Chutkan on 2/2/2015. (lctsc2) (Entered: 02/02/2015)
02/02/2015	36	ORDER granting 15 Motion to Strike. The jury demand in Defendant's 12 counterclaim and Answer is stricken. Signed by Judge Tanya S. Chutkan on 2/2/2015. (lctsc2) (Entered: 02/02/2015)
02/08/2015	37	TRANSCRIPT OF PROCEEDINGS before Magistrate Judge Deborah A. Robinson held on 1/22/2015; Page Numbers: 1-73. Court Reporter/Transcriber Bowles Reporting Service, Telephone number 860-464-1083, Court Reporter Email Address : brs-ct@sbcglobal.net. For the first 90 days after this filing date, the transcript may be viewed at the courthouse at a public terminal or purchased from the court reporter referenced

		<p>above. After 90 days, the transcript may be accessed via PACER. Other transcript formats, (multi-page, condensed, CD or ASCII) may be purchased from the court reporter.</p> <p>NOTICE RE REDACTION OF TRANSCRIPTS: The parties have twenty-one days to file with the court and the court reporter any request to redact personal identifiers from this transcript. If no such requests are filed, the transcript will be made available to the public via PACER without redaction after 90 days. The policy, which includes the five personal identifiers specifically covered, is located on our website at www.dcd.uscourts.gov.</p> <p>Redaction Request due 3/1/2015. Redacted Transcript Deadline set for 3/11/2015. Release of Transcript Restriction set for 5/9/2015.(znmw,) (Entered: 02/09/2015)</p>
02/10/2015	38	Consent MOTION to Intervene by AMERICAN SOCIETY FOR TESTING AND MATERIALS, NATIONAL FIRE PROTECTION ASSOCIATION, INC., AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC. (Attachments: # 1 Text of Proposed Order)(Fee, J.) (Entered: 02/10/2015)
02/11/2015		MINUTE ORDER: Granting consent 38 Motion to Intervene for the limited purpose of opposing Defendant's 33 Motion to Consolidate for the purposes of Discovery. Oppositions to the Motion to Consolidate are due by February 17, 2015; reply due by February 27, 2015. Signed by Judge Tanya S. Chutkan on 2/11/2015. (lctsc2) (Entered: 02/11/2015)
02/12/2015		Set/Reset Deadlines: Opposition due by 2/17/2005. Reply due by 2/27/2015. (sm) (Entered: 02/12/2015)
02/17/2015	39	Memorandum in opposition to re 33 MOTION to Consolidate Cases <i>Defendant-Counterclaim Public.Resource.Org, Inc.'s Motion to Consolidate for the Purposes of Discovery</i> filed by AMERICAN SOCIETY FOR TESTING AND MATERIALS, AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC., NATIONAL FIRE PROTECTION ASSOCIATION, INC.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D)(Fee, J.) (Entered: 02/17/2015)
02/18/2015	40	Memorandum in opposition to re 33 MOTION to Consolidate Cases <i>Defendant-Counterclaim Public.Resource.Org, Inc.'s Motion to Consolidate for the Purposes of Discovery</i> filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Declaration of Jonathan Hudis, # 2 Exhibit A to Hudis Declaration, # 3 Exhibit B to Hudis Declaration, # 4 Exhibit C to Hudis Declaration, # 5 Exhibit D to Hudis Declaration, # 6 Exhibit E to Hudis Declaration, # 7 Text of Proposed Order)(Hudis, Jonathan) (Entered: 02/18/2015)
02/26/2015	41	WITHDRAWAL of Motion by PUBLIC.RESOURCE.ORG, INC. re 33 MOTION to Consolidate Cases <i>Defendant-Counterclaim Public.Resource.Org,</i>

		<i>Inc.'s Motion to Consolidate for the Purposes of Discovery</i> filed by PUBLIC.RESOURCE.ORG, INC. . (Bridges, Andrew) (Entered: 02/26/2015)
03/04/2015	42	Consent MOTION for Extension of Time to Complete Discovery <i>filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Text of Proposed Order)(Hudis, Jonathan) (Entered: 03/04/2015)
03/09/2015		Set/Reset Hearings: Status Conference, including consideration of 42 scheduled for 3/19/2015 at 02:00 PM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. All counsel shall meet and confer in advance of said hearing in an effort to reach a consensus regarding the expeditious completion of discovery. (lcdar2) (Entered: 03/09/2015)
03/17/2015	43	MEET AND CONFER STATEMENT. (Hudis, Jonathan) (Entered: 03/17/2015)
03/19/2015		Minute Entry for proceedings held before Magistrate Judge Deborah A. Robinson: Status Conference held on 3/19/2015. (Court Reporter Lisa Moreira) (zcmm,) (Entered: 03/19/2015)
03/23/2015		Minute Entry for proceedings held before Magistrate Judge Deborah A. Robinson: Status Conference conducted on 3/19/2015; pending motions Document No. 27 and Document No. 42 taken under advisement. (FTR Time Frame: 2.5) (lcdar1,) (Entered: 03/23/2015)
03/26/2015	44	<p>TRANSCRIPT OF PROCEEDINGS before Magistrate Judge Deborah A. Robinson held on March 19, 2015; Page Numbers: 1-60. Date of Issuance: March 26, 2015. Court Reporter/Transcriber Lisa A. Moreira, RDR, CRR, Telephone number 202-354-3187, Court Reporter Email Address : Lisa_Moreira@dcd.uscourts.gov.</p> <p>For the first 90 days after this filing date, the transcript may be viewed at the courthouse at a public terminal or purchased from the court reporter referenced above. After 90 days, the transcript may be accessed via PACER. Other transcript formats, (multi-page, condensed, CD or ASCII) may be purchased from the court reporter.</p> <p>NOTICE RE REDACTION OF TRANSCRIPTS: The parties have twenty-one days to file with the court and the court reporter any request to redact personal identifiers from this transcript. If no such requests are filed, the transcript will be made available to the public via PACER without redaction after 90 days. The policy, which includes the five personal identifiers specifically covered, is located on our website at www.dcd.uscourts.gov.</p> <p>Redaction Request due 4/16/2015. Redacted Transcript Deadline set for 4/26/2015. Release of Transcript Restriction set for 6/24/2015.(Moreira, Lisa) (Entered: 03/26/2015)</p>
04/09/2015	45	MOTION for Hearing re 27 Amended MOTION to Compel <i>filed</i> , 42 Consent MOTION for Extension of Time to Complete Discovery <i>filed without</i>

		<i>opposition from Defendant</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Hudis, Jonathan) (Entered: 04/09/2015)
04/15/2015	46	STIPULATION re 27 Amended MOTION to Compel <i>filed</i> , 42 Consent MOTION for Extension of Time to Complete Discovery <i>filed</i> , 45 MOTION for Hearing re 27 Amended MOTION to Compel <i>filed</i> , 42 Consent MOTION for Extension of Time to Complete Discovery <i>filed without opposition from Defendant -- submitted by Public.Resource.Org, Inc. and by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC..</i> (Hudis, Jonathan) (Entered: 04/15/2015)
04/21/2015		MINUTE ORDER: Motion for Hearing 45 is hereby GRANTED; a Status Hearing is scheduled for 10:00 AM on Wednesday May 6, 2015, counsel shall appear in courtroom 4. Signed by Magistrate Judge Deborah A. Robinson on 4/21/2015. (lcdar1,) (Entered: 04/21/2015)
04/21/2015		MINUTE ENTRY: Status Hearing re 45 set for 5/6/2015 10:00 AM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. Counsel shall appear. Signed by Magistrate Judge Deborah A. Robinson on 4/21/2015. (lcdar1,) (Entered: 04/21/2015)
05/05/2015		MINUTE ORDER: Motion for Extension of Time to Complete Discovery 42 is hereby GRANTED. Signed by Magistrate Judge Deborah A. Robinson on 5/5/2015.(lcdar1,) (Entered: 05/05/2015)
05/05/2015		Status Hearing: Status Hearing re 45 set for 5/6/2015 at 10:00 AM has been CONTINUED to 5/13/2015 at 2:00 PM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. Counsel shall appear. The Court apologizes for any inconvenience this may cause the parties. Signed by Magistrate Judge Deborah A. Robinson on 4/21/2015. (lcdar1,) (Entered: 04/21/2015) (Entered: 05/05/2015)
05/08/2015		Set/Reset Hearings: As a result of a scheduling conflict, it is necessary for the court to again continue the status conference. Status Conference now scheduled for 05/13/2015 is hereby CONTINUED to 2:00 PM on 5/21/2015 in Courtroom 4 before Magistrate Judge Deborah A. Robinson. The court again apologizes to counsel and parties for any inconvenience. (lcdar1,) (Entered: 05/08/2015)
05/18/2015	47	MOTION for Extension of Time to Complete Discovery <i>filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Text of Proposed Order)(Hudis, Jonathan) (Entered: 05/18/2015)
05/19/2015	48	NOTICE <i>Consent Request for Telephonic Status Conference [Dkt. No. 45]</i> by PUBLIC.RESOURCE.ORG, INC. re Set/Reset Hearings, (Becker, Matthew) (Entered: 05/19/2015)

05/20/2015	49	ORDER granting in part and denying in part Motion to Compel Document No. 27 . Signed by Magistrate Judge Deborah A. Robinson on 05/20/2015.(lcdar1,) (Entered: 05/20/2015)
05/20/2015		Set/Reset Hearings: Status Conference is hereby set for 6/11/2015 at 02:00 PM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. (lcdar1,) (Entered: 05/20/2015)
05/21/2015		MINUTE ORDER: Consent Request for Telephonic Status Conference 48 is hereby DENIED as moot. Signed by Magistrate Judge Deborah A. Robinson on 5/21/2015.(lcdar1,) (Entered: 05/21/2015)
06/03/2015	50	NOTICE of Change of Address by Jonathan Hudis (Hudis, Jonathan) (Entered: 06/03/2015)
06/04/2015	51	Memorandum in opposition to re 47 MOTION for Extension of Time to Complete Discovery <i>filed Public Resource's Opposition to Plaintiffs' Motion to Extend Time for Fact Discovery</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Bridges, Andrew) (Entered: 06/04/2015)
06/08/2015	52	Consent MOTION for Order <i>Request for Telephonic Status Conference</i> by PUBLIC.RESOURCE.ORG, INC. (Becker, Matthew) (Entered: 06/08/2015)
06/08/2015		MINUTE ORDER granting 52 Consent Motion for Telephonic Status Conference. Signed by Magistrate Judge Deborah A. Robinson on June 8, 2015. (lcdar2) (Entered: 06/08/2015)
06/11/2015		Minute Entry for Telephone Status Conference held before Magistrate Judge Deborah A. Robinson on 6/11/15 : For the reasons stated on the record, Plaintiffs' Motion to Extend Time for Fact Discovery 47 is denied. The parties shall comply with the dates previously set, which serve to modify the Scheduling Order of 10/16/14. Court Reporter: USDC Court Reporters - Ctrm. 4; FTR Time Frame: 3:01:56 - 3:27:13. Plaintiffs' Counsel: Jonathan Hudis, Kathleen Cooney-Porter and Kate Cappaert; Defendant's Counsel: Matthew Becker, David Halperin and Mitchell Stoltz. (kk) (Entered: 06/12/2015)
06/11/2015	53	ORDER ON CONSENT MOTION TO EXTEND TIME FOR DISCOVERY AND CASE SCHEDULE: Fact Discovery closes on 5/18/15; Opening Expert Disclosures due 6/15/15; Rebuttal Expert Disclosures due 7/15/15; Replies to Rebuttal Disclosures due 7/29/15; Final Replies to Expert Disclosures due 8/12/15; Discovery closes on 9/11/15; Post-Discovery Conference set for 9/15/15 at 2:00 PM in Courtroom 4 before Magistrate Judge Deborah A. Robinson; signed by Magistrate Judge Deborah A. Robinson on 6/11/15, nunc pro tunc to 5/5/15. (kk) (Entered: 06/12/2015)
07/06/2015	54	TRANSCRIPT OF TELEPHONE STATUS CONFERENCE before Magistrate Judge Deborah A. Robinson held on 6-11-2015; Page Numbers: 1-19. Date of Issuance:7-6-2015. Transcriber Annette M. Montalvo, Telephone number 202-354-3111, Transcriber/Court Reporter Email Address : annette.montalvo@gmail.com. For the first 90 days after this filing date, the transcript may be viewed at the courthouse at a public terminal or purchased from the court reporter referenced

		<p>above. After 90 days, the transcript may be accessed via PACER. Other transcript formats, (multi-page, condensed, CD or ASCII) may be purchased from the court reporter.</p> <p>NOTICE RE REDACTION OF TRANSCRIPTS: The parties have twenty-one days to file with the court and the court reporter any request to redact personal identifiers from this transcript. If no such requests are filed, the transcript will be made available to the public via PACER without redaction after 90 days. The policy, which includes the five personal identifiers specifically covered, is located on our website at www.dcd.uscourts.gov.</p> <p>Redaction Request due 7/27/2015. Redacted Transcript Deadline set for 8/6/2015. Release of Transcript Restriction set for 10/4/2015.(Montalvo, Annette) Modified on 7/8/2015 (zrdj). (Entered: 07/06/2015)</p>
07/09/2015		<p>MINUTE ORDER: The status conference previously set for 7/15/15 is hereby vacated. All deadlines set forth in Judge Robinson's 06/11/2015 Scheduling Order 53 shall remain in effect. Signed by Judge Tanya S. Chutkan on 7/9/15. (DJS) (Entered: 07/09/2015)</p>
09/09/2015	55	<p>STIPULATION re Order <i>JOINT STIPULATION AND [PROPOSED] ORDER EXTENDING COMPLETION DATE OF DEPOSITION OF PLAINTIFFS' EXPERT DR. PHILLIPS TO SEPTEMBER 22, 2015</i> by PUBLIC.RESOURCE.ORG, INC.. (Becker, Matthew) (Entered: 09/09/2015)</p>
09/10/2015		<p>MINUTE ORDER: The court has reviewed the Joint Stipulation And Proposed Order To Extend The Date On Which Expert Deposition May Be Taken (Document No. 55) filed by the parties on September 9, 2015. Counsel for the parties are hereby reminded that the applicable local and federal rules require that requests for action by the court be made by motion. Accordingly, if it remains the intention of the parties to request an extension of any deadline, counsel shall do so by motion. Signed by Magistrate Judge Deborah A. Robinson on 9/10/2015. (lcdar1,) (Entered: 09/10/2015)</p>
09/10/2015	56	<p>Joint MOTION for Extension of Time to <i>Extend the Date on Which Expert Deposition May Be Taken and Proposed Order</i> by PUBLIC.RESOURCE.ORG, INC. (Becker, Matthew) (Entered: 09/10/2015)</p>
09/10/2015	57	<p>Consent MOTION for Order <i>Request for Telephonic Status Conference</i> by PUBLIC.RESOURCE.ORG, INC. (Becker, Matthew) (Entered: 09/10/2015)</p>
09/11/2015		<p>MINUTE ORDER: Motion for Extension of Time 56 and Consent Motion for Telephonic Status Conference 57 are hereby GRANTED. It is further ORDERED that the Status Conference now scheduled for September 15, 2015, is hereby CONTINUED to September 29, 2015 at 4:00 PM. Signed by Magistrate Judge Deborah A. Robinson on 9/11/2015. (lcdar1,) (Entered: 09/11/2015)</p>
09/11/2015		<p>Set/Reset Hearings: Status Conference is hereby set for 9/29/2015 at 04:00 PM in Courtroom 4 before Magistrate Judge Deborah A. Robinson. (lcdar1,) (Entered: 09/11/2015)</p>
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		Minute Entry for proceedings held before Magistrate Judge Deborah A. Robinson: Post-Discovery Status Conference conducted by telephone on 9/29/2015. All parties agree that Discovery is closed and that there are no disputes. Plaintiffs' Counsel: Kathleen Cooney-Porter and Jonathan Hudis; Defendant's Counsel: Matthew Becker and David Halperin. Court Reporter FTR Gold - Ctrm. 4. (FTR Time Frame: 4:11:00-4:16:10). (mr) (Entered: 09/29/2015)
10/27/2015		MINUTE ORDER. A status conference will be held in both this case and American Society for Testing and Materials v. Public.Resource.Org, Inc., Civil Action No. 1:13-cv-01215-TSC on Wednesday, November 4, 2015 at 10:15am. The court intends to set schedules for briefing summary judgment motions in both cases at the status conference. The parties to this case are hereby directed to jointly file their proposed schedules for summary judgment briefing, accompanied by proposed orders, by Friday, October 30, 2015. Signed by Judge Tanya S. Chutkan on 10/27/15. (lctsc2) (Entered: 10/27/2015)
10/28/2015		Set/Reset Deadlines/Hearings: Proposed Briefing Schedule due by 10/30/2015. Scheduling Conference set for 11/4/2015 at 10:15 AM in Courtroom 2 before Judge Tanya S. Chutkan. (zsm) (Entered: 10/28/2015)
10/30/2015	58	PROPOSED BRIEFING SCHEDULE <i>and Joint Report of the Parties, submitted by</i> AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Exhibit A - Plaintiffs' Proposed Order, # 2 Exhibit B - Defendant's Proposed Order)(Hudis, Jonathan) (Entered: 10/30/2015)
11/04/2015		Minute Entry for proceedings held before Judge Tanya S. Chutkan: Status Conference held on 11/4/2015. Order to issue. (Court Reporter Bryan Wayne.) (zsm) (Entered: 11/04/2015)
11/04/2015		MINUTE ORDER setting briefing schedule: Plaintiffs' Motion for Summary Judgment due by December 21, 2015; Defendant's Opposition to Plaintiffs' Motion for Summary Judgment and COMBINED Cross-Motion for Summary Judgment due by January 21, 2016; Plaintiffs' Reply in Support of their Motion for Summary Judgment and COMBINED Opposition to Defendant's Cross-Motion for Summary Judgment due by February 18, 2016; Defendant's Reply in Support of its Cross-Motion for Summary Judgment due by March 3, 2016; Amicus briefs due by February 11, 2016. Signed by Judge Tanya S. Chutkan on 11/4/15. (lctsc2) (Entered: 11/04/2015)
11/04/2015		Set/Reset Deadlines/Hearings: Summary Judgment motions due by 12/21/2015. Response to Motion for Summary Judgment due by 1/21/2016. Reply to Motion for Summary Judgment due by 2/18/2016. Brief due by 2/11/2016. Replies due by 3/3/2016. VACATED PURSUANT TO MINUTE ORDER FILED ON 11/5/2015.....Motion Hearing set for 3/22/2016 at 9:30 AM in Courtroom 2 before Judge Tanya S. Chutkan. (zsm) Modified on 11/6/2015 (tth). (Entered: 11/04/2015)
11/05/2015		MINUTE ORDER: Due to an unexpected scheduling conflict, the motion hearing previously set for 3/22/2016 is hereby VACATED. A new date will be

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		set at a later time. Signed by Judge Tanya S. Chutkan on 11/5/15. (DJS) (Entered: 11/05/2015)
11/14/2015	59	<p>TRANSCRIPT OF 11/04/15 STATUS HEARING before Judge Tanya S. Chutkan, held on November 4, 2015. Page Numbers: 1-21. Date of Issuance: 11/14/15. Court Reporter: Bryan A. Wayne; telephone number: 202-354-3186. Transcripts may be ordered by submitting the Transcript Order Form.</p> <p>For the first 90 days after this filing date, the transcript may be viewed at the courthouse at a public terminal or purchased from the court reporter referenced above. After 90 days, the transcript may be accessed via PACER. Other transcript formats, (multi-page, condensed, CD or ASCII) may be purchased from the court reporter.</p> <p>NOTICE RE REDACTION OF TRANSCRIPTS: The parties have twenty-one days to file with the court and the court reporter any request to redact personal identifiers from this transcript. If no such requests are filed, the transcript will be made available to the public via PACER without redaction after 90 days. The policy, which includes the five personal identifiers specifically covered, is located on our website at www.dcd.uscourts.gov.</p> <p>Redaction Request due 12/5/2015. Redacted Transcript Deadline set for 12/15/2015. Release of Transcript Restriction set for 2/12/2016. (Wayne, Bryan) (Entered: 11/14/2015)</p>
12/21/2015	60	<p>MOTION for Summary Judgment <i>Filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Statement of Facts Points of Authority, # 2 Statement of Facts Statement of Undisputed Facts, # 3 Declaration Declaration of Jonathan Hudis, # 4 Exhibit Ex. A, # 5 Exhibit Ex. B, # 6 Exhibit Ex. C, # 7 Exhibit Ex. D, # 8 Exhibit Ex. E, # 9 Exhibit Ex. F, # 10 Exhibit Ex. G, # 11 Exhibit Ex. H, # 12 Exhibit Ex. I, # 13 Exhibit Ex. J, # 14 Exhibit Ex. K, # 15 Exhibit Ex. L, # 16 Exhibit Ex. M, # 17 Exhibit Ex. N, # 18 Exhibit Ex. O, # 19 Exhibit Ex. P, # 20 Exhibit Ex. Q, # 21 Exhibit Ex. R, # 22 Exhibit Ex. S, # 23 Exhibit Ex. T, # 24 Exhibit Ex. U, # 25 Exhibit Ex. V-1, # 26 Exhibit Ex. V-2, # 27 Exhibit Ex. W, # 28 Exhibit Ex. X, # 29 Exhibit Ex. Y, # 30 Exhibit Ex. Z, # 31 Exhibit Ex. AA, # 32 Exhibit Ex. BB, # 33 Exhibit Ex. CC, # 34 Exhibit Ex. DD, # 35 Exhibit Ex. EE, # 36 Exhibit Ex. FF-1, # 37 Exhibit Ex. FF-2, # 38 Exhibit Ex. FF-3, # 39 Exhibit Ex. FF-4, # 40 Exhibit Ex. FF-5, # 41 Exhibit Ex. FF-6, # 42 Exhibit Ex. GG, # 43 Exhibit Ex. HH, # 44 Exhibit Ex. II, # 45 Exhibit Ex. JJ, # 46 Exhibit Ex. KK, # 47 Exhibit Ex. LL, # 48 Exhibit Ex. MM, # 49 Declaration Declaration of Marianne Ernesto, # 50 Exhibit Ex. NN, # 51 Exhibit Ex. OO, # 52 Exhibit Ex. PP, # 53 Exhibit Ex. QQ, # 54 Exhibit Ex. RR, # 55 Exhibit Ex. SS, # 56 Exhibit Ex. TT, # 57 Exhibit Ex. UU, # 58 Exhibit Ex. VV, # 59 Exhibit Ex. WW, # 60 Exhibit Ex. XX, # 61 Exhibit Ex. YY, # 62 Exhibit Ex. ZZ, # 63 Exhibit Ex. AAA, # 64 Exhibit Ex. BBB, # 65 Exhibit Ex. CCC, # 66 Exhibit Ex. DDD, # 67 Exhibit Ex. EEE, # 68 Exhibit Ex. FFF, # 69 Exhibit Ex. GGG, # 70 Exhibit Ex. HHH, # 71 Exhibit Ex. III, # 72 Exhibit Ex. JJJ, # 73 Declaration Declaration of</p>

		Lauress Wise, # 74 Exhibit Ex. KKK, # 75 Exhibit Ex. LLL, # 76 Declaration Declaration of Wayne Camara, # 77 Exhibit Ex. MMM, # 78 Declaration Declaration of Felice Levine, # 79 Exhibit Ex. NNN, # 80 Exhibit Ex. OOO (Public Version), # 81 Exhibit Ex. PPP, # 82 Exhibit Ex. QQQ, # 83 Exhibit Ex. RRR, # 84 Exhibit Ex. SSS, # 85 Exhibit Ex. TTT-1, # 86 Exhibit Ex. TTT-2, # 87 Exhibit Ex. UUU, # 88 Declaration Declaration of Kurt Geisinger, # 89 Declaration Declaration of Dianne Schneider, # 90 Text of Proposed Order Proposed Order, # 91 Certificate of Service Certificate of Service) (Hudis, Jonathan). Added MOTION for Permanent Injunction on 12/22/2015 (td). (Entered: 12/21/2015)
12/21/2015	61	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Exhibit OOO - sought to be sealed, # 2 Memorandum in Support, # 3 Text of Proposed Order, # 4 Certificate of Service)(Hudis, Jonathan) (Entered: 12/21/2015)
01/04/2016		MINUTE ORDER: Granting 61 Plaintiff's Sealed Motion for Leave to File Document Under Seal. Exhibit OOO to the Declaration of Felice J. Levine in Support of Plaintiffs' Motion for Summary Judgment and a Permanent Injunction 60 shall be filed under seal. Exhibit OOO contains Plaintiffs' revenue and expenses associated with the preparation, publication, and advertising of the "Standards for Educational and Psychological Testing" (1999 ed.)(the 1999 Standards). In this action, Plaintiffs assert that Defendant has infringed their copyright in the 1999 Standards by digitally copying the work and publishing it online. The court finds that there is a significant interest in preserving the confidentiality of Exhibit OOO and that there is no compelling interest for public disclosure of Exhibit OOO at this time. Signed by Judge Tanya S. Chutkan on 1/4/16. (Entered: 01/04/2016)
01/04/2016	62	SEALED DOCUMENT (Exhibit OOO) filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. re 60 MOTION for Summary Judgment <i>Filed</i> MOTION for Permanent Injunction filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC., Order on Sealed Motion for Leave to File Document Under Seal,,,. (This document is SEALED and only available to authorized persons.)(ztd) (Entered: 01/05/2016)
01/13/2016	63	Consent MOTION for Leave to Appear Pro Hac Vice :Attorney Name- Sebastian E. Kaplan, :Firm- Fenwick & West LLP, :Address- 555 California Street, 12th Fl., San Francisco, CA 94104. Phone No. - (415) 875-2300. Fax No. - (415) 281-1350 Filing fee \$ 100, receipt number 0090-4377619. Fee Status: Fee Paid. by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Declaration of Sebastian Kaplan, # 2 Text of Proposed Order)(Stoltz, Mitchell) (Entered: 01/13/2016)

01/19/2016	64	NOTICE of Appearance by Jonathan P. Labukas on behalf of AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Labukas, Jonathan) (Entered: 01/19/2016)
01/21/2016	65	NOTICE OF WITHDRAWAL OF APPEARANCE as to AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC.. Attorney Kathleen Cooney-Porter terminated. (Cooney-Porter, Kathleen) (Entered: 01/21/2016)
01/21/2016	66	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Text of Proposed Order, # 2 Memorandum in Support of Defendant-Counterclaimant Public.Resource.Org's Motion to Strike, # 3 Declaration of Matthew Becker in Support of Motion to Strike, # 4 Exhibit 1, # 5 Exhibit 2, # 6 Exhibit 6, # 7 Exhibit 7)(Bridges, Andrew) (Entered: 01/21/2016)
01/21/2016	67	MOTION to Strike 60 the declaration of Kurt P. Geisinger by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Memorandum in Support of Defendant-Counterclaimant Public.Resource.Orgs Motion to Strike [PUBLIC], # 2 Declaration of Matthew Becker [PUBLIC], # 3 Exhibit 1 (Filed Under Seal), # 4 Exhibit 2 (Filed Under Seal), # 5 Exhibit 3, # 6 Exhibit 4, # 7 Exhibit 5, # 8 Exhibit 6 (Filed Under Seal), # 9 Exhibit 7 (Filed Under Seal), # 10 Exhibit 8, # 11 Exhibit 9, # 12 Exhibit 10, # 13 Exhibit 11, # 14 Exhibit 12, # 15 Exhibit 13, # 16 Exhibit 14, # 17 Exhibit 15, # 18 Exhibit 16, # 19 Text of Proposed Order, # 20 Certificate of Service)(Bridges, Andrew) Modified on 1/21/2016 linkage and text(td). (Entered: 01/21/2016)
01/21/2016	68	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Text of Proposed Order Granting Public.Resource.Org's Motion to File Under Seal, # 2 [SEALED] Memorandum of Points and Authorities In Support of Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 3 [SEALED] Statement of Material Facts, # 4 [SEALED] Statement of Disputed Facts, # 5 [SEALED] Objections to Plaintiffs' Evidence, # 6 [Sealed] Exhibit 2, # 7 [Sealed] Exhibit 3, # 8 [Sealed] Exhibit 4, # 9 [Sealed] Exhibit 5, # 10 [Sealed] Exhibit 6, # 11 [Sealed] Exhibit 8, # 12 [Sealed] Exhibit 11, # 13 [Sealed] Exhibit 12, # 14 [Sealed] Exhibit 13, # 15 [Sealed] Exhibit 14, # 16 [Sealed] Exhibit 15, # 17 [Sealed] Exhibit 17, # 18 [Sealed] Exhibit 18, # 19 [Sealed] Exhibit 19, # 20 [Sealed] Exhibit 20, # 21 [Sealed] Exhibit 21, # 22 [Sealed] Exhibit 22, # 23 [Sealed] Exhibit 23, # 24 [Sealed] Exhibit 24, # 25 [Sealed] Exhibit 25, # 26 [Sealed] Exhibit 26, # 27 [Sealed] Exhibit 27, # 28 [Sealed] Exhibit 28, # 29 [Sealed] Exhibit 29, # 30 [Sealed] Exhibit 30, # 31 [Sealed] Exhibit 32, # 32 [Sealed] Exhibit 33, # 33 [Sealed] Exhibit 34, # 34 [Sealed] Exhibit 38, # 35 [Sealed] Exhibit 41, # 36 [Sealed] Exhibit 42, # 37 [Sealed] Exhibit 43, # 38 [Sealed] Exhibit 50, # 39 [Sealed] Exhibit 64, # 40 Certificate of Service) (Bridges, Andrew) (Entered: 01/21/2016)

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01/21/2016	69	MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Memorandum in Support of Public.Resource.Org's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 2 Statement of Material Facts, # 3 Statement of Disputed Facts, # 4 Objections to Evidence, # 5 Declaration of Carl Malamud, # 6 Declaration of Matthew Becker, # 7 Request for Judicial Notice, # 8 Text of Proposed Order Granting Public.Resource.Org's Motion for Summary Judgment and Denying Plaintiffs' Motion for Summary Judgment and Permanent Injunction)(Bridges, Andrew) (Entered: 01/22/2016)
01/21/2016	71	Memorandum in opposition to re 60 MOTION for Summary Judgment <i>Filed</i> MOTION for Permanent Injunction filed by PUBLIC.RESOURCE.ORG, INC..(See docket entry no. 69 to view document.) (td) (Entered: 01/22/2016)
01/22/2016	70	LARGE ADDITIONAL ATTACHMENT(S) <i>Index of Consolidated Exhibits In Support of Public.Resource.Org's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> by PUBLIC.RESOURCE.ORG, INC. 69 MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2 [Sealed], # 3 Exhibit 3 [Sealed], # 4 Exhibit 4 [Sealed], # 5 Exhibit 5 [Sealed], # 6 Exhibit 6 [Sealed], # 7 Exhibit 7, # 8 Exhibit 8 [Sealed], # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11 [Sealed], # 12 Exhibit 12 [Sealed], # 13 Exhibit 13 [Sealed], # 14 Exhibit 14 [Sealed], # 15 Exhibit 15 [Sealed], # 16 Exhibit 17 [Sealed], # 17 Exhibit 18 [Sealed], # 18 Exhibit 19 [Sealed], # 19 Exhibit 20 [Sealed], # 20 Exhibit 21 [Sealed], # 21 Exhibit 22 [Sealed], # 22 Exhibit 23 [Sealed], # 23 Exhibit 24 [Sealed], # 24 Exhibit 25 [Sealed], # 25 Exhibit 26 [Sealed], # 26 Exhibit 27 [Sealed], # 27 Exhibit 28 [Sealed], # 28 Exhibit 29 [Sealed], # 29 Exhibit 30 [Sealed], # 30 Exhibit 31, # 31 Exhibit 32 [Sealed], # 32 Exhibit 33 [Sealed], # 33 Exhibit 34 [Sealed], # 34 Exhibit 35, # 35 Exhibit 36, # 36 Exhibit 37, # 37 Exhibit 38 [Sealed], # 38 Exhibit 39, # 39 Exhibit 40, # 40 Exhibit 41 [Sealed], # 41 Exhibit 42 [Sealed], # 42 Exhibit 43 [Sealed], # 43 Exhibit 44, # 44 Exhibit 45, # 45 Exhibit 46, # 46 Exhibit 47, # 47 Exhibit 48, # 48 Exhibit 49, # 49 Exhibit 50 [Sealed], # 50 Exhibit 51, # 51 Exhibit 52, # 52 Exhibit 53, # 53 Exhibit 54, # 54 Exhibit 55, # 55 Exhibit 56, # 56 Exhibit 57, # 57 Exhibit 58, # 58 Exhibit 59, # 59 Exhibit 60, # 60 Exhibit 61, # 61 Exhibit 62, # 62 Exhibit 63, # 63 Exhibit 64 [Sealed], # 64 Exhibit 65, # 65 Exhibit 66, # 66 Exhibit 67, # 67 Exhibit 68, # 68 Exhibit 69, # 69 Exhibit 70, # 70 Exhibit 71, # 71 Exhibit 72, # 72 Exhibit 73, # 73 Exhibit 74)(Bridges, Andrew) (Entered: 01/22/2016)
01/25/2016	72	Consent MOTION for Extension of Time to File Response/Reply as to 67 MOTION to Strike 66 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) <i>filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1

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		Text of Proposed Order, # 2 Certificate of Service)(Hudis, Jonathan) (Entered: 01/25/2016)
01/28/2016	73	Consent MOTION for Leave to Appear Pro Hac Vice :Attorney Name- Nikia L. Gray, :Firm- Quarles & Brady LLP, :Address- 1700 K Street, NW, Ste 825. Phone No. - 202-372-9600. Fax No. - 202-372-9599 Filing fee \$ 100, receipt number 0090-4392805. Fee Status: Fee Paid. by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Declaration of Nikia L. Gray, # 2 Text of Proposed Order for Admission of Nikia L. Gray Pro Hac Vice, # 3 Certificate of Service)(Hudis, Jonathan) (Entered: 01/28/2016)
01/29/2016		MINUTE ORDER: Granting 73 Motion for Leave to Appear Pro Hac Vice. Attorney Nikia L. Gray is hereby admitted pro hac vice to appear in this matter on behalf of Plaintiffs American Educational Research Association, Inc., American Psychological Association, Inc., and National Council on Measurement in Education, Inc. Signed by Judge Tanya S. Chutkan on 1/26/16. (DJS) (Entered: 01/29/2016)
01/29/2016		MINUTE ORDER: Granting 72 Plaintiffs' Consent Motion for Extension of Time. Plaintiffs shall respond to Defendant's motion to strike the Declaration of Kurt P. Geisinger 67 by February 18, 2016. Defendant's reply due March 3, 2016. Signed by Judge Tanya S. Chutkan on 1/29/16. (DJS) (Entered: 01/29/2016)
02/04/2016		MINUTE ORDER granting 66 Sealed Motion for Leave to File Document Under Seal; granting 68 Sealed Motion for Leave to File Document Under Seal. Signed by Judge Tanya S. Chutkan on 2/4/16. (zsm) (Entered: 02/04/2016)
02/04/2016	74	SEALED DOCUMENT filed by PUBLIC.RESOURCE.ORG, INC.. re Order on Sealed Motion for Leave to File Document Under Seal,. (This document is SEALED and only available to authorized persons.)(ztd) (Entered: 02/04/2016)
02/04/2016	75	SEALED DOCUMENT filed by PUBLIC.RESOURCE.ORG, INC.. re Order on Sealed Motion for Leave to File Document Under Seal,. (This document is SEALED and only available to authorized persons.)(ztd) (Entered: 02/04/2016)
02/08/2016		MINUTE ORDER: Granting 63 Motion for Leave to Appear Pro Hac Vice. Attorney Sebastian E. Kaplan is hereby admitted pro hac vice to appear in this matter on behalf of Defendant. Signed by Judge Tanya S. Chutkan on 2/8/16. (DJS) (Entered: 02/08/2016)
02/11/2016	76	NOTICE of Appearance by Bruce D. Brown on behalf of The Reporters Committee for Freedom of the Press (Brown, Bruce) (Main Document 76 replaced on 2/11/2016) (td). (Entered: 02/11/2016)
02/11/2016	77	Consent MOTION for Leave to File <i>Amicus Curiae Brief</i> by The Reporters Committee for Freedom of the Press (Attachments: # 1 Proposed Amicus Curiae Brief, # 2 Text of Proposed Order)(Brown, Bruce) (Entered: 02/11/2016)

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02/11/2016	78	Unopposed MOTION for Leave to File <i>Amicus Brief</i> by Law Scholars (Attachments: # 1 Exhibit BRIEF OF LAW SCHOLARS AS AMICI CURIAE IN SUPPORT OF DEFENDANT COUNTERCLAIMANT, # 2 Text of Proposed Order)(Gellis, Catherine) (Entered: 02/11/2016)
02/11/2016	79	NOTICE of Appearance by Charles Duan on behalf of PUBLIC KNOWLEDGE (Duan, Charles) (Entered: 02/11/2016)
02/11/2016	80	LCvR 7.1 CERTIFICATE OF DISCLOSURE of Corporate Affiliations and Financial Interests by PUBLIC KNOWLEDGE (Duan, Charles) (Entered: 02/11/2016)
02/11/2016	81	MOTION for Leave to File <i>Amicus Curiae Brief</i> by PUBLIC KNOWLEDGE (Attachments: # 1 Exhibit, # 2 Text of Proposed Order)(Duan, Charles) (Entered: 02/11/2016)
02/11/2016	82	NOTICE of Appearance by Jeffrey T. Pearlman on behalf of SINA BAHRAM (Pearlman, Jeffrey) (Entered: 02/11/2016)
02/11/2016	83	Unopposed MOTION for Leave to File <i>Brief of Amicus Curiae in Support of Defendant</i> by SINA BAHRAM (Attachments: # 1 Exhibit Proposed Amicus Curiae Brief of Sina Bahram in Support of Defendant, # 2 Text of Proposed Order)(Pearlman, Jeffrey) (Entered: 02/11/2016)
02/12/2016	84	MOTION for Leave to File <i>Corrected Declarations</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Exhibit 1- Declaration of Marianne Ernesto, # 2 Exhibit 2- Declaration of Wayne Camara, # 3 Exhibit 3- Declaration of Felice J. Levine, # 4 Text of Proposed Order, # 5 Certificate of Service)(Hudis, Jonathan) (Entered: 02/12/2016)
02/16/2016		MINUTE ORDER: Granting 77 Motion By Reporters Committee for Freedom of the Press for leave to file Amicus brief in support of Defendant's Motion for Summary Judgment; Granting 78 Motion By Law Scholars for leave to file Amicus brief in support of Defendant's Motion for Summary Judgment; Granting 81 Motion by Public Knowledge for leave to file Amicus brief in support of Defendant's Motion for Summary Judgment; Granting 83 Motion by Sina Bahram for Leave to file Amicus brief in support of Defendant's Motion for Summary Judgment. Signed by Judge Tanya S. Chutkan on 2/16/16. (DJS) (Entered: 02/16/2016)
02/16/2016		MINUTE ORDER: Granting 84 Plaintiffs' Consent Motion for Leave to File corrected Declarations. The Declarations of Marianne Ernesto, Wayne Camara, and Felice Levine (ECF Nos. 60-49, 60-76, and 60-78) filed in Support of Plaintiffs' Motion for Summary Judgment and a Permanent Injunction 60 are hereby accepted for filing without the necessity of further filing or serving any copy. Signed by Judge Tanya S. Chutkan on 2/16/16. (DJS) (Entered: 02/16/2016)
02/16/2016	85	AMICUS BRIEF by REPORTERS COMMITTEE FOR FREEDOM OF THE PRESS. (td) Modified date filed on 2/17/2016 (td). (Entered: 02/17/2016)

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02/16/2016	86	AMICUS BRIEF by Law Scholars. (td) (Entered: 02/17/2016)
02/16/2016	87	AMICUS BRIEF by PUBLIC KNOWLEDGE. (td) (Entered: 02/17/2016)
02/16/2016	88	AMICUS BRIEF by SINA BAHRAM. (td) (Entered: 02/17/2016)
02/18/2016	89	REPLY to opposition to motion re 69 MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> , 60 MOTION for Summary Judgment <i>Filed</i> MOTION for Permanent Injunction (<i>Plaintiffs' Reply in Further Support of Plaintiffs' Motion for Summary Judgment and Permanent Injunction and Opposition to Defendant's Motion for Summary Judgment</i>) filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Plaintiffs' Statement of Material Facts in Opposition to Defendant's Motion for Summary Judgment, # 2 Plaintiffs' Reply to Defendants' Statement of Disputed Facts, # 3 Plaintiffs' Response to Defendant's Objections to Plaintiffs' Evidence, # 4 Declaration of Nikia L. Gray, # 5 Exhibit VVV, # 6 Exhibit WWW, # 7 Exhibit XXX, # 8 Exhibit YYY, # 9 Exhibit ZZZ, # 10 Exhibit AAAA, # 11 Exhibit BBBB, # 12 Exhibit CCCC, # 13 Exhibit DDDD, # 14 Exhibit EEEE, # 15 Exhibit FFFF, # 16 Exhibit GGGG, # 17 Exhibit HHHH, # 18 Exhibit IIII, # 19 Exhibit JJJJ, # 20 Exhibit KKKK, # 21 Exhibit LLLL, # 22 Exhibit MMMM, # 23 Exhibit NNNN, # 24 Exhibit OOOO, # 25 Exhibit PPPP, # 26 Exhibit QQQQ, # 27 Exhibit RRRR, # 28 Exhibit SSSS, # 29 Exhibit TTTT, # 30 Exhibit UUUU, # 31 Exhibit VVVV, # 32 Exhibit WWWW, # 33 Exhibit XXXX, # 34 Exhibit YYYYY, # 35 Exhibit ZZZZ, # 36 Exhibit AAAAAA, # 37 Exhibit BBBBBB, # 38 Exhibit CCCCCC, # 39 Exhibit DDDDDD, # 40 Exhibit EEEEE, # 41 Exhibit FFFFFF, # 42 Exhibit GGGGGG, # 43 Exhibit HHHHHH, # 44 Exhibit IIIIII, # 45 Exhibit JJJJJ, # 46 Exhibit KKKKKK, # 47 Exhibit LLLLLL, # 48 Exhibit MMMMMM, # 49 Exhibit NNNNNN, # 50 Exhibit OOOOOO, # 51 Exhibit PPPPPP, # 52 Exhibit QQQQQQ, # 53 Exhibit RRRRRR, # 54 Exhibit SSSSSS, # 55 Exhibit TTTTTT, # 56 Exhibit UUUUUU, # 57 Exhibit VVVVVV, # 58 Exhibit WWWW, # 59 Exhibit XXXXX, # 60 Exhibit YYYYYY, # 61 Exhibit ZZZZZ, # 62 Exhibit AAAAAA, # 63 Declaration of Wayne Camara, # 64 Plaintiffs' Objections to Defendant's Evidence, # 65 Certificate of Service)(Hudis, Jonathan) (Entered: 02/18/2016)
02/18/2016	90	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Memorandum in Support, # 2 Plaintiffs' Statement of Genuine, Disputed Issues of Material Facts, # 3 Plaintiffs' Reply to Defendant's Statement of Disputed Facts, # 4 Plaintiffs' Response to Defendants' Objections to Plaintiffs' Evidence, # 5 Exhibit VVVVV - Expert Report of S.E. Phillips, Ph.D., J.D., # 6 Exhibit XXXXX - Deposition Transcript of Wayne J. Camara, # 7 Exhibit YYYYY - Deposition Transcript of Dianne L. Schneider, # 8 Exhibit AAAAAA - Deposition Transcript of Marianne Ernesto, # 9 Plaintiffs' Opposition to Defendant's Motion to Strike the Declaration of Kurt F.

		Geisinger (sealed version), # 10 Exhibit 1- Deposition Transcript of Kurt F. Geisinger, # 11 Text of Proposed Order, # 12 Certificate of Service)(Hudis, Jonathan) (Entered: 02/18/2016)
02/18/2016	91	RESPONSE re 67 MOTION to Strike 66 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (<i>Plaintiffs' Opposition to Defendant's Motion to Strike the Declaration of Kurt F. Geisinger</i>) filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Declaration of Jonathan Hudis, # 2 Exhibit 1, # 3 Certificate of Service)(Hudis, Jonathan) (Entered: 02/18/2016)
02/18/2016		MINUTE ORDER granting 90 Sealed Motion for Leave to File Document Under Seal. Signed by Judge Tanya S. Chutkan on 2/18/16. (zsm) (Entered: 02/18/2016)
02/18/2016	92	SEALED DOCUMENT filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. re Order on Sealed Motion for Leave to File Document Under Seal. (This document is SEALED and only available to authorized persons.)(ztd) (Entered: 02/19/2016)
02/18/2016	93	SEALED REPLY TO OPPOSITION filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. re 60 MOTION for Summary Judgment <i>Filed</i> MOTION for Permanent Injunction (ztd) (Entered: 02/19/2016)
02/18/2016	94	SEALED DOCUMENT filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Exhibit VVVVVV, # 2 Exhibit XXXXX, # 3 Exhibit YYYYYY, # 4 Exhibit AAAAAA)(ztd) (Entered: 02/19/2016)
02/18/2016	95	SEALED OPPOSITION filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. re 67 MOTION to Strike 66 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Exhibit)(ztd) (Entered: 02/19/2016)
03/03/2016	96	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Exhibit [Filed Under Seal] Reply In Support of Defendant Public Resource's Motion to Strike the Declaration of Kurt F. Geisinger [90-12], # 2 Text of Proposed Order Granting

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		Motion to File Under Seal, # 3 Certificate of Service Re Motion to File Under Seal)(Bridges, Andrew) (Entered: 03/03/2016)
03/03/2016	97	REPLY to opposition to motion re 67 MOTION to Strike 66 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) [REDACTED] <i>REPLY IN SUPPORT OF PUBLIC RESOURCE'S MOTION TO STRIKE THE DECLARATION KURT F. GEISINGER [90-12]</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Bridges, Andrew) (Entered: 03/03/2016)
03/03/2016	98	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 [Filed Under Seal] Reply In Support of Defendant Public Resource's Motion for Summary Judgment, # 2 [Filed Under Seal] Declaration of Matthew Becker In Support of Defendant's Reply to Its Motion for Summary Judgment, # 3 [Filed Under Seal] Objections to Plaintiffs' Supplemental Evidence, # 4 Exhibit 75 [Sealed], # 5 Exhibit 76 [Sealed], # 6 Exhibit 77 [Sealed], # 7 Exhibit 78 [Sealed], # 8 Exhibit 79 [Sealed], # 9 Exhibit 80 [Sealed], # 10 Text of Proposed Order Granting Motion to File Under Seal, # 11 Certificate of Service Re Motion to File Under Seal)(Bridges, Andrew) (Entered: 03/03/2016)
03/03/2016	99	REPLY to opposition to motion re 69 MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> filed by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # 1 [Public Redacted] Reply Declaration of Matthew Becker In Further Support of Defendant's Motion for Summary Judgment, # 2 [Public Redacted] Defendant's Objections to Plaintiffs' Supplemental Evidence, # 3 Supplemental Request for Judicial Notice, # 4 [Public Redacted] Objections to Plaintiffs' Supplemental Evidence, # 5 Exhibit 75 [Sealed Placeholder], # 6 Exhibit 76 [Sealed Placeholder], # 7 Exhibit 77 [Sealed Placeholder], # 8 Exhibit 78 [Sealed Placeholder], # 9 Exhibit 79 [Sealed Placeholder], # 10 Exhibit 80 [Sealed Placeholder], # 11 Exhibit 81, # 12 Exhibit 82, # 13 Exhibit 83)(Bridges, Andrew) (Entered: 03/03/2016)
03/04/2016		Minute ORDER granting 98 Sealed Motion for Leave to File Document Under Seal. Signed by Judge Tanya S. Chutkan on 3/4/16. (zsm) (Entered: 03/07/2016)
03/04/2016	100	SEALED REPLY TO OPPOSITION filed by PUBLIC.RESOURCE.ORG, INC. re 69 MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> , 98 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (ztd) (Entered: 03/07/2016)
03/08/2016	101	NOTICE of Intent to File Oppositions to Defendant's Motions, filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. re 99 Reply to opposition to Motion,,, (Hudis, Jonathan) (Entered: 03/08/2016)

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03/15/2016	102	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Text of Proposed Order Granting Defendant's Unopposed Motion for Leave to File Under Seal, # 2 Exhibit 5 [Sealed Version] of Corrected Memorandum of Points and Authorities In Support of Defendant's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment, # 3 Exhibit 6 [Sealed Version] of Corrected Statement of Material Facts In Support of Defendant Public Resource's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 4 Exhibit 7 [Sealed Version] of Corrected Statement of Disputed Facts in Opposition to Plaintiffs' Motion for Summary Judgment, # 5 Certificate of Service Re Motion to Seal)(Becker, Matthew) (Entered: 03/15/2016)
03/15/2016	103	Unopposed MOTION for Leave to File <i>Corrected Documents</i> by PUBLIC.RESOURCE.ORG, INC. (Attachments: # 1 Text of Proposed Order Granting Defendant's Unopposed Motion for Leave to File Corrected Documents, # 2 Exhibit 1 [Redacted Version] of Memorandum of Points and Authorities In Support of Defendant Public Resource's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 3 Exhibit 2 [Redacted Version] of Statement of Material Facts In Support of Defendant Public Resource's Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 4 Exhibit 3 [Redacted Version] of Statement of Disputed Facts In Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction, # 5 Exhibit 4 Table of Corrections)(Becker, Matthew) (Entered: 03/15/2016)
03/17/2016		MINUTE ORDER granting 103 Motion for Leave to File. Signed by Judge Tanya S. Chutkan on 3/17/16. (zsm) (Entered: 03/17/2016)
03/17/2016	104	SEALED DOCUMENT filed by PUBLIC.RESOURCE.ORG, INC.. re Order on Sealed Motion for Leave to File Document Under Seal. (This document is SEALED and only available to authorized persons.)(ztd) (Entered: 03/17/2016)
03/17/2016	105	REDACTED DOCUMENT- to 69 MOTION for Summary Judgment <i>and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction</i> , Order on Motion for Leave to File by PUBLIC.RESOURCE.ORG, INC. (td) (Entered: 03/17/2016)
03/21/2016	106	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Memorandum in Support, # 2 Exhibit 1 to Declaration of Jonathan Hudis, # 3 Plaintiffs' Objections to Defendant's Evidence in Support of its Reply Memorandum, # 4 Text of Proposed Order, # 5 Certificate of Service)(Hudis, Jonathan) (Entered: 03/21/2016)
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		Memorandum in opposition to re 98 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Declaration of Jonathan Hudis, # 2 Certificate of Service)(Hudis, Jonathan) (Entered: 03/21/2016)
03/21/2016	108	RESPONSE re 98 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) <i>Plaintiffs' Responses to Defendant's Objections to Plaintiffs' Supplemental Evidence</i> filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Hudis, Jonathan) (Entered: 03/21/2016)
03/21/2016	109	RESPONSE re 98 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) <i>Plaintiffs' Objections to Defendant-Counterclaimant Public.Resource.Org, Inc.'s Evidence In Support of Defendant-Counterclaimant's Reply Memorandum in Support of Its Motion for Summary Judgment</i> filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Hudis, Jonathan) (Entered: 03/21/2016)
03/21/2016	110	SEALED DOCUMENT filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC.. re 99 Reply to opposition to Motion,,, filed by PUBLIC.RESOURCE.ORG, INC.. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Exhibit)(ztd) (Entered: 03/22/2016)
03/22/2016		MINUTE ORDER granting 106 Sealed Motion for Leave to File Document Under Seal. Signed by Judge Tanya S. Chutkan on 3/22/16. (zsm) (Entered: 03/22/2016)
03/31/2016	111	SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by PUBLIC.RESOURCE.ORG, INC. (This document is SEALED and only available to authorized persons.) (Attachments: # 1 Text of Proposed Order Granting Motion to Seal Defendant Public Resource's Reply to Its Objections and Responses to Plaintiffs' Objections, # 2 Certificate of Service Re Motion to Seal Defendant Public Resource's Reply to Its Objections and Responses to Plaintiffs' Objections, # 3 [Filed Under Seal] Defendant Public.Resource.Org, Inc.'s Reply to Its Objections and Motions to Strike Plaintiffs' Supplemental Evidence, # 4 [Filed Under Seal] Responses to Plaintiffs' Objections to Defendant's Evidence in Support of Its Reply Memorandum In Support of Its Motion for Summary Judgment)(Becker, Matthew) (Entered: 03/31/2016)

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03/31/2016	112	REPLY to opposition to motion re 106 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (This document is SEALED and only available to aut <i>[Redacted Version]</i> Defendant Public.Resource.Org, Inc.'s Reply to Its Objections and Motions to Strike Plaintiffs' Supplemental Evidence filed by PUBLIC.RESOURCE.ORG, INC.. (Attachments: # 1 Declaration of Matthew Becker In Support of Defendant Public Resource's Reply to Its Objections and Motions to Strike Plaintiffs' Supplemental Evidence)(Becker, Matthew) (Entered: 03/31/2016)
03/31/2016	113	RESPONSE re 106 SEALED MOTION FOR LEAVE TO FILE DOCUMENT UNDER SEAL filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (This document is SEALED and only available to aut <i>[Redacted Version]</i> Defendant Public.Resource.Org, Inc.'s Responses to Plaintiffs' Objections to Defendant's Evidence In Support of Its Reply Memorandum In Support of Its Motion for Summary Judgment filed by PUBLIC.RESOURCE.ORG, INC.. (Becker, Matthew) (Entered: 03/31/2016)
05/26/2016	114	NOTICE of Change of Address by Jonathan Hudis (Hudis, Jonathan) (Entered: 05/26/2016)
06/03/2016		MINUTE ORDER. Motion Hearing on all pending motions set for 9/12/2016 at 9:30 AM in Courtroom 2 before Judge Tanya S. Chutkan. Signed by Judge Tanya S. Chutkan on 6/3/16. (lctsc2) (Entered: 06/03/2016)
06/03/2016		Set/Reset Hearings: Motion Hearing set for 9/12/2016 at 9:30 AM in Courtroom 2 before Judge Tanya S. Chutkan. (zsm) (Entered: 06/03/2016)
09/09/2016		MINUTE ORDER: The motions hearing previously scheduled for 9:30 a.m. on 9/12/2016 has been rescheduled to begin at 9:00 a.m. in Courtroom 2. Signed by Judge Tanya S. Chutkan on 9/9/2016. (lctsc2) (Entered: 09/09/2016)
09/09/2016		Set/Reset Hearings: Motion Hearing set for 9/12/2016 at 9:00 AM in Courtroom 2 before Judge Tanya S. Chutkan. (zsm) (Entered: 09/09/2016)
09/12/2016		Minute Entry for proceedings held before Judge Tanya S. Chutkan: Motion Hearing held on 9/12/2016 re 69 MOTION for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment and Permanent Injunction filed by PUBLIC.RESOURCE.ORG, INC., 60 MOTION for Summary Judgment Filed MOTION for Permanent Injunction filed by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. Motions taken under advisement. (Court Reporter Bryan Wayne.) (zsm) (Entered: 09/12/2016)
09/21/2016	115	ORDER denying 67 Defendant's Motion to Strike Expert Declaration. Signed by Judge Tanya S. Chutkan on 9/21/2016. (lctsc2) (Entered: 09/21/2016)

JA2154

10/13/2016	116	<p>TRANSCRIPT OF 9/12/16 MOTIONS HEARING, before Judge Tanya S. Chutkan, held on September 12, 2016. Page Numbers: 1-142. Date of Issuance: 10/13/16. Court Reporter: Bryan A. Wayne. Transcripts may be ordered by submitting the Transcript Order Form</p> <p>For the first 90 days after this filing date, the transcript may be viewed at the courthouse at a public terminal or purchased from the court reporter referenced above. After 90 days, the transcript may be accessed via PACER. Other transcript formats, (multi-page, condensed, CD or ASCII) may be purchased from the court reporter.</p> <p>NOTICE RE REDACTION OF TRANSCRIPTS: The parties have twenty-one days to file with the court and the court reporter any request to redact personal identifiers from this transcript. If no such requests are filed, the transcript will be made available to the public via PACER without redaction after 90 days. The policy, which includes the five personal identifiers specifically covered, is located on our website at www.dcd.uscourts.gov.</p> <p>Redaction Request due 11/3/2016. Redacted Transcript Deadline set for 11/13/2016. Release of Transcript Restriction set for 1/11/2017.(Wayne, Bryan) (Entered: 10/13/2016)</p>
02/02/2017	117	MEMORANDUM AND OPINION re 60 Plaintiffs' motion for summary judgment and 69 Defendant's cross-motion for summary judgment. Signed by Judge Tanya S. Chutkan on 2/2/2017. (lctsc2) (Entered: 02/02/2017)
02/02/2017	118	ORDER granting in part and denying in part 60 Plaintiffs' motion for summary judgment; denying 69 Defendant's cross-motion for summary judgment; denying as moot 96 Sealed Motion for Leave to File Document Under Seal; denying as moot 111 Sealed Motion for Leave to File Document Under Seal. Signed by Judge Tanya S. Chutkan on 2/2/2017. (lctsc2) (Entered: 02/02/2017)
02/10/2017	119	MOTION to Clarify <i>Order [Dkt No 118]</i> and, in Alternative, for Continuance by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Exhibit A, # 2 Text of Proposed Order, # 3 Certificate of Service)(Hudis, Jonathan) (Entered: 02/10/2017)
02/13/2017		MINUTE ORDER: 119 Plaintiffs' Motion is GRANTED to the extent that Plaintiffs are not required to abide by the deadline for requesting attorney fees under Federal Rule 54(d). The parties are hereby ORDERED to file a joint status report by 3/3/2017 (1) updating the court as to Defendant's compliance with 118 the court's order to remove the standards from its website and (2) providing a jointly proposed schedule for moving forward with this litigation. Signed by Judge Tanya S. Chutkan on 2/13/2017. (lctsc2) (Entered: 02/13/2017)
02/14/2017		Set/Reset Deadlines: Joint Status Report due by 3/3/2017. (jth) (Entered: 02/14/2017)
02/17/2017	120	

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		NOTICE OF APPEAL TO DC CIRCUIT COURT as to 118 Order on Motion for Summary Judgment,, Order on Motion for Permanent Injunction,,, Order on Sealed Motion for Leave to File Document Under Seal,,, 117 Memorandum & Opinion by PUBLIC.RESOURCE.ORG, INC.. Filing fee \$ 505, receipt number 0090-4848021. Fee Status: Fee Paid. Parties have been notified. (Bridges, Andrew) (Entered: 02/17/2017)
02/21/2017	121	Transmission of the Notice of Appeal, Order Appealed, and Docket Sheet to US Court of Appeals. The Court of Appeals fee was paid this date re 120 Notice of Appeal to DC Circuit Court,. (jf) (Entered: 02/21/2017)
03/02/2017		USCA Case Number 17-7039 for 120 Notice of Appeal to DC Circuit Court, filed by PUBLIC.RESOURCE.ORG, INC. (zrdj) (Entered: 03/02/2017)
03/03/2017	122	Joint STATUS REPORT <i>in compliance with Court's Minute order of Feb. 13, 2017, filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. (Attachments: # 1 Certificate of Service)(Hudis, Jonathan) (Entered: 03/03/2017)
03/03/2017	123	Consent MOTION to Stay re 122 Status Report, <i>pending appeal to DC Circuit, filed</i> by AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Attachments: # 1 Text of Proposed Order, # 2 Certificate of Service)(Hudis, Jonathan) (Entered: 03/03/2017)
03/03/2017		MINUTE ORDER granting 123 Plaintiffs' stipulated motion to stay proceedings in this case pending resolution of Defendant's appeal. Signed by Judge Tanya S. Chutkan on 3/3/2017. (lctsc2) (Entered: 03/03/2017)
03/03/2017	124	NOTICE <i>RE PRELIMINARY AND NON-BINDING STATEMENT OF ISSUES BY APPELLANT/DEFENDANT-COUNTERCLAIMANT</i> PUBLIC.RESOURCE.ORG, INC. by PUBLIC.RESOURCE.ORG, INC. (Bridges, Andrew) (Entered: 03/03/2017)
03/03/2017	125	NOTICE <i>OF TRANSCRIPT ORDER BY DEFENDANT-COUNTERCLAIMANT</i> PUBLIC.RESOURCE.ORG, INC. by PUBLIC.RESOURCE.ORG, INC. (Bridges, Andrew) (Entered: 03/03/2017)
03/23/2017	126	NOTICE of Appearance by Clifton Scott Elgarten on behalf of AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC. (Elgarten, Clifton) (Entered: 03/23/2017)
03/24/2017	127	NOTICE OF WITHDRAWAL OF APPEARANCE as to AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, INC., AMERICAN PSYCHOLOGICAL ASSOCIATION, INC., NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, INC.. Attorney Jonathan P. Labukas; Nikia L. Gray and Jonathan Hudis terminated. (Hudis, Jonathan) (Entered: 03/24/2017)

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07/06/2017	MINUTE ORDER: In light of the parties' pending appeal before the Circuit Court, the Clerk of the Court is hereby directed to Administratively Close this case. Upon resolution of the appeal (#17-7039) the parties may file a motion to return this case to the court's active docket. Any such motion shall contain a proposed order for moving forward with this case. Signed by Judge Tanya S. Chutkan on 7/6/17. (DJS) (Entered: 07/06/2017)
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Description:	Docket Report	Search Criteria:	1:14-cv-00857-TSC
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JA2157

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

AMERICAN EDUCATIONAL RESEARCH)	
ASSOCIATION, INC.)	
1430 K Street, NW)	
Suite 1200)	
Washington, DC 20005,)	
)	
AMERICAN PSYCHOLOGICAL	)	Civil Action No. _____
ASSOCIATION, INC.)	
750 First Street NE	)	COMPLAINT FOR COPYRIGHT
Washington, DC 20002-4242, and	)	INFRINGEMENT AND
	)	CONTRIBUTORY COPYRIGHT
	)	INFRINGEMENT
NATIONAL COUNCIL ON)	
MEASUREMENT IN EDUCATION, INC.)	
2424 American Lane)	
Madison, WI 53704,)	
)	
Plaintiffs,)	
)	
v.)	
)	
PUBLIC.RESOURCE.ORG, INC.)	
1005 Gravenstein Highway North)	
Sebastopol, CA 95472)	
)	
Defendant.)	

COMPLAINT

Plaintiffs, as and for their Complaint against Defendant, allege as follows:

1. This is an action by three non-profit organizations: the American Educational Research Association, Inc., the American Psychological Association, Inc., and the National Council on Measurement in Education, Inc. (collectively, "Plaintiffs"), creators of the work entitled "Standards for Educational and Psychological Testing" (the "Standards"). This action seeks injunctive relief against Public.Resource.Org, Inc. for infringement and contributory infringement of Plaintiffs' copyright in the Standards.

THE PARTIES

2. Plaintiff, American Educational Research Association, Inc. (“AERA”), is a District of Columbia not-for-profit corporation whose main offices are located at 1430 K Street, NW, Suite 1200, Washington, DC 20005.

3. AERA is the major national scientific society for research on education and learning. AERA’s mission is to advance knowledge about education, to encourage scholarly inquiry related to education, and to promote the use of research to improve education and serve the public good.

4. Plaintiff, American Psychological Association, Inc. (“APA”), is a District of Columbia not-for-profit corporation whose main offices are located at 750 First Street, NE, Washington, DC 20002.

5. APA is the largest scientific and professional organization representing psychology in the United States. APA is the world's largest association of psychologists and counts a vast number of researchers, educators, clinicians, consultants and students among its members. APA’s mission is to advance the creation, communication and application of psychological knowledge to benefit society and improve people’s lives.

6. Plaintiff, National Council on Measurement in Education, Inc. (“NCME”), is a District of Columbia not-for-profit corporation whose main offices are located at 2424 American Lane, Madison, WI 53704.

7. NCME is a professional organization for individuals involved in assessment, evaluation, testing, and other aspects of educational measurement. NCME’s members are involved in the construction and use of standardized tests; new forms of assessment, including performance-based assessment; program design; and program evaluation. NCME’s members

include university faculty; test developers; state and federal testing and research directors; professional evaluators; testing specialists in business, industry, education, community programs, and other professions; licensure, certification, and credentialing professionals; graduate students from educational, psychological, and other measurement programs; and others involved in testing issues and practices.

8. Upon information and belief, Defendant, Public.Resource.Org, Inc. (“Public Resource”), is a California not-for-profit corporation having offices located at 1005 Gravenstein Highway, North Sebastopol, CA 95472.

9. According to its Articles of Incorporation, which can be found at <https://public.resource.org/public.resource.articles.html>, the purpose of Public Resource is to

create, architect, design, implement, operate and maintain public works projects on the Internet for EDUCATIONAL, CHARITABLE, AND SCIENTIFIC PURPOSES to the benefit of the general public and the public interest; to increase and diffuse knowledge about the Internet in its broadest sense; to promote and facilitate the expansion, development, and growth of the public infrastructure of the Internet by any means consistent with the public interest through other activities, including, but not limited to, publications, meetings, conferences, training, educational seminars, and the issuance of grants and other financial support to educational institutions, foundations and other organizations exclusively for EDUCATIONAL, CHARITABLE, AND SCIENTIFIC PURPOSES.

10. Upon information and belief, Public Resource publishes on the Internet, and in particular on the website <https://law.resource.org>, *inter alia*, state and municipal codes, public safety codes, and technical standards.

11. Upon information and belief, at least some of the codes and standards that Public Resource publishes on the Internet, and in particular on the website <https://law.resource.org>, are subject to U.S. copyright protection.

12. Upon information and belief, Public Resource publishes these codes and standards on the Internet, and in particular on the website <https://law.resource.org>, without

obtaining the permission of the copyright owners of these works.

13. AERA and APA, two of the three joint copyright owners of the Standards, are located in Washington, DC.

14. Public Resource has designed the website <https://law.resource.org/pub/us/cfr/manifest.us.html> to attract visitors from the District of Columbia to copy, distribute to others, or incorporate into other works, Plaintiff's Standards.

15. Public Resource has designed the website <https://law.resource.org/pub/us/code/dc/> to attract visitors from the District of Columbia by providing online copies of the District of Columbia Code.

16. On the website <https://public.resource.org/about/index.html>, Public Resource solicits donations from the public to support Public Resource's activities, via credit card or through Public Resource's PayPal account. Upon information and belief, Public Resource has received donations to support its activities from Google, Yahoo!, the Electronic Frontier Foundation, Creative Commons Corporation, Justia Inc., Fenwick & West LLP, Durie Tangri, Davis Wright Tremaine LLP, iRights Law, Alston & Bird, the Elbaz Family Foundation, the Cutts Foundation, the O'Reilly Foundation, the Beal Fund, the Sunlight Foundation, the Omidyar Network, and others.

17. Public Resource, through the website <https://public.resource.org>, solicits visitors from the District of Columbia to submit financial donations to Public Resource.

18. Public Resource, through the website <https://public.resource.org/about.index.html>, allows visitors from the District of Columbia to e-mail Public Resource directly at the e-mail address carl@media.org.

19. Upon information and belief, Public Resource has collaborated with organizations

in Washington, DC to copy videos and upload them to YouTube. National Technical Information Service Library of Commerce, <https://public.resource.org/ntis.gov/> (last visited Apr. 25, 2014); *see also* Kate Murphy, *Catching Up With Carl Malamud*, N.Y. TIMES, Jan. 26, 2013, www.nytimes.com/2013/01/27/opinion/sunday/catching-up-with-carl-malamud.html.

20. Upon information and belief, Public Resource, through its President and founder Carl Malamud, has testified in Washington, DC before the Subcommittee on Courts, Intellectual Property, and the Internet of the House Judiciary Committee regarding the scope of protection to be afforded copyrighted works. *An Edict of Government Amendment: Hearing on the Scope of Copyright Protection Before the Subcomm. On Courts, Intellectual Property, and the Internet of the H. Comm. on the Judiciary*, 113th Cong. (2014) (statement of Carl Malamud, President, Public.Resource.Org.).

21. Upon information and belief, Public Resource, through its President and founder Carl Malamud, has participated in conferences and given speeches in Washington, DC since at least 2009. Peter Glaskowsky, *Carl Malamud's digital manifesto*, CNET News, Sept. 16, 2009, http://news.cnet.com/8301-13512_3-10354324-23.html; Carl Malamud, gov 2.0 Expo, www.gov2expo.com/gov2expo2010/public/schedule/speaker/1824 (last visited Apr. 25, 2014); *An Evening with Carl Malamud, Next Tuesday at ALA's Washington DC HQ, Resource Shelf*, <http://web.resourceshelf.com/go/resourceblog/58874> (last visited Apr. 25, 2014).

22. Defendant has designed its website(s) to encourage visitors from the District of Columbia to copy, to distribute to others in this District and/or to create derivative works based on Plaintiffs' Standards.

23. Defendant also sells various items on the Internet, including Public.Resource.Org mouse pads, stamps, and stickers, among other items. *See*

<http://www.zazzle.com/carlmalamud/gifts>. This website is available to residents of the District of Columbia, who may purchase Defendants' merchandise when visiting the site.

JURISDICTION AND VENUE

24. This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a). This is a civil action arising under an Act of Congress relating to copyrights.

25. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(a). The Claims plaintiffs allege in this Complaint arose, in substantial part, in the District of Columbia. Defendant may be found in Washington, DC, and this Court has personal jurisdiction over Defendant. Defendant has directed its infringing activities to Washington, DC and, on information and belief, materially contributed to the infringing activities of third parties in this District.

26. This Court has jurisdiction over Defendant, because, whether directly or through an authorized agent, Defendant has been present in Washington, DC; transacted business in Washington, DC; caused tortious injury by an act or omission in Washington, DC; and/or caused tortious injury in Washington, DC by an act or omission outside Washington, DC. Defendant also regularly does and/or solicits business; engages in other persistent courses of conduct; and/or derives substantial revenue from goods used or consumed, or services rendered, in Washington, DC.

FACTS

Creation of the Standards for Educational and Psychological Testing

27. In 1954, Plaintiff APA prepared and published the "Technical Recommendations for Psychological Tests and Diagnostic Techniques." In 1955, Plaintiffs AERA and NCME prepared and published a companion document entitled, "Technical Recommendations for

Achievement Tests.” Subsequently, a joint committee of the three organizations modified, revised and consolidated the two documents into the first Joint Standards. Beginning with the 1966 revision, the three organizations (AERA, APA and NCME – collectively, the “Plaintiffs”) collaborated in developing the “Joint Standards” (or simply, the “Standards”). Each subsequent revision of the Standards has been careful to cite the previous Standards and note that it is a revision and update of that document.

28. Beginning in the mid-1950s, Plaintiffs formed and periodically reconstituted a committee of experts in psychological and educational assessment, charged with the initial development of the Technical Recommendations and then each subsequent revision of the (renamed) Standards. These committees were formed by the Plaintiffs’ Presidents (or their designees), who would meet and jointly agree on the membership. Often a chair or co-chairs of these committees were selected by joint agreement. Beginning with the 1966 version of the Standards, this committee became referred to as the “Joint Committee.”

29. Many different fields of endeavor rely on assessments. Plaintiffs have ensured that the range of these fields of endeavor is represented in the Joint Committee’s membership – *e.g.*, admissions, achievement, clinical counseling, educational, licensing-credentialing, employment, policy, and program evaluation. Similarly, the Joint Committee’s members represent expertise across major functional assessment areas – *e.g.*, validity, equating, reliability, test development, scoring, reporting, interpretation, large scale interpolation and cognitive behavioral therapy.

30. From the time of their initial creation to the present, the preparation and periodic revisions to the Standards entail intensive labor and considerable cross-disciplinary expertise. Each time the Standards are revised, Plaintiffs select and arrange for meetings of the leading

authorities in psychological and educational assessments. During these meetings, certain Standards are combined, pared down and/or augmented, others are deleted altogether, and some are created as whole new individual Standards. The most recent version of the Standards is nearly 200 pages, and took several years to complete.

Why the Standards Were Created

31. The Standards originally were created to improve professional practice in testing and assessment. The Standards can be used to guide the sound and ethical use of tests, and also to evaluate the quality of tests and testing practices.

32. The Standards are intended to guide test developers and test users. Test user Standards refer to those that help decide how to choose certain tests, interpret scores, or make decisions based on tests results. Test users include clinical or industrial psychologists, research directors, school psychologists, counselors, employment supervisors, teachers, and various administrators who select or interpret tests for their organizations. The intended audience of the Standards is broad and cuts across audiences with varying backgrounds and different training. The Standards are not simply intended for members of the Plaintiffs that are the sponsoring organizations of the Standards.

33. An essential component of responsible professional practice is maintaining technical competence. Many professional associations also have developed standards and principles of technical practice in assessment. The Standards have been widely cited to address technical, professional, and operational norms for all forms of assessments that are professionally developed and used in a variety of settings.

34. The Standards are designed to apply to professional test developers, sponsors, publishers, and users by providing criteria for the evaluation of tests, testing practices, and the

effects of test use. The Standards have been used to develop testing guidelines for such activities as college admissions, personnel selection, test translations, test user qualifications, and computer-based testing.

35. The Standards were not created in response to an expressed governmental or regulatory need, nor were they prepared in response to any legislative action or judicial decision. However, the Standards have been cited in judicial decisions related to the proper use and evidence for assessment, as well as by state and federal legislators.

The Benefits that the Standards Bring to the Relevant Public and Constituencies

36. The Standards' primary purposes are to provide criteria for evaluating tests and testing practices, and to encourage test developers, sponsors, publishers, and users to adopt the Standards. There is no requirement for members of the professional associations or testing organizations and users to do so. There is no mechanism to enforce compliance with the Standards on the part of the test developer or test user. The Standards, moreover, do not attempt to provide psychometric answers to policy or legal questions.

37. On the other hand, the Standards apply broadly to a wide range of standardized instruments and procedures that sample an individual's behavior, including tests, assessments, inventories, scales, and other testing vehicles. The Standards apply equally to standardized multiple-choice tests, performance assessments (including tests comprised of only open-ended essays), and hands-on assessments or simulations. The main exceptions are that the Standards do not apply to unstandardized questionnaires (*e.g.*, unstructured behavioral checklists or observational forms), teacher-made tests, and subjective decision processes (*e.g.*, a teacher's evaluation of students' classroom participation over the course of a semester).

**Promotion and Distribution of the Standards,
and Income Earned by Plaintiffs from Sales of the Standards**

38. Plaintiffs promote and sell copies of the Standards via their websites, at annual meetings, in public listings to students, and to educational institution faculty. Advertisements promoting the Standards have appeared in meeting brochures, in scholarly journals, and in the hallways at professional meetings. None of the Plaintiff organizations has solicited any government agency to incorporate the Standards into the Code of Federal Regulations or other rules of Federal or State agencies.

39. As the designated publisher of the Standards, AERA sometimes provides promotional complementary print copies to students or professors. To date, the Standards have never been posted by any of the three Plaintiffs, or with the permission of the three Plaintiffs, on any publicly accessible website. All print copies of the Standards bear a copyright notice. Except for a few complementary print copies, the Standards are not digitized or given away for free; and certainly they are not made available to the public by any of the three organizations for anyone to copy free of charge.

40. The Standards are sold at retail prices ranging from \$35.00 to \$40.00 per copy. Income generated from sales of the 1999 Standards, on average, has been approximately in excess of \$127,000 per year.

Plaintiffs' Ownership of the Copyright in the Standards

41. The Standards comprise an original work of authorship, entitled to protection under the U.S. Copyright Act, 17 U.S.C. §§ 101, *et seq.*

42. The Plaintiffs are joint owners of the copyright in and to the Standards.

43. The Standards have been registered with the U.S. Register of Copyrights under Registration Number TX 5-100-196, having an effective date of December 8, 1999. *See* Exhibit

A attached.

44. A Supplementary copyright registration for the Standards has been issued by the U.S. Register of Copyrights under Supplementary Registration Number TX 6-434-609, having an effective date of February 25, 2014. *See* Exhibit B attached.

**Defendant's Copying, and Enabling Others to
Copy, the Standards without Plaintiffs' Permission**

45. On its website, <https://law.resource.org/pub/us/cfr/ibr/001/aera.standards.1999.pdf>, Defendant has published in its entirety Plaintiffs' 1999 Standards.

46. Defendant published Plaintiffs' 1999 Standards to its website, <https://law.resource.org/pub/us/cfr/ibr/001/aera.standards.1999.pdf>, without the permission or authorization of any of the Plaintiff organizations.

47. In front of the unauthorized copy of the 1999 Standards that Defendant published to its <https://law.resource.org/pub/us/cfr/ibr/001/aera.standards.1999.pdf> website, Defendant placed a cover sheet or "Certificate," falsely implying that the publication of Plaintiffs' Standards to Defendants' website was somehow authorized or sanctioned by U.S. law.

48. Defendant's activities have encouraged others to publish the Standards without Plaintiffs' permission or authorization. *See, e.g.*, the posting of Plaintiffs' 1999 Standards to the Internet Archive at <https://archive.org/details/gov.law.aera.standards.1999>. The posting of Plaintiffs' 1999 Standards to the Internet Archive is in the exact same format, and uses the same cover sheet or "Certificate" employed by Defendant in its publication of the Plaintiffs' Standards to Defendant's website.

49. Plaintiff AERA requested in writing that Defendant remove the Standards from its online postings. Defendant refused.

FIRST CAUSE OF ACTION
(Copyright Infringement)

50. Plaintiffs repeat and re-allege paragraphs 1 through 49 of the Complaint.

51. Defendant's activities – publishing Plaintiffs' Standards to the Internet without Plaintiffs' permission or authorization – violate Plaintiffs' exclusive rights under the U.S. Copyright Act, 17 U.S.C. § 106.

52. Defendant's activities – publishing Plaintiffs' Standards to the Internet without Plaintiffs' permission or authorization – constitute infringement of Plaintiffs' copyright in the Standards.

53. Defendant has knowingly, willfully and deliberately infringed Plaintiffs' copyright in the Standards, and continues to do so.

54. Plaintiffs have suffered and continue to suffer damages as a result of Defendant's actions, in an amount to be proven at trial.

55. During the period in which Defendant is infringing, Plaintiffs have no adequate remedy at law for the injuries that continue to be inflicted by Defendant.

SECOND CAUSE OF ACTION
(Contributory Copyright Infringement)

56. Plaintiffs repeat and re-allege paragraphs 1 through 55 of the Complaint.

57. Upon information and belief, in addition to Defendant's direct infringement of Plaintiffs' copyright in the Standards, other persons and/or entities have directly infringed Plaintiffs' copyright in the Standards.

58. Upon information and belief, Defendant has known, and/or with the exercise of reasonable diligence should have known, that other persons and/or entities have directly infringed Plaintiffs' copyright in the Standards.

59. Upon information and belief, Defendant has substantially participated in other persons' and/or entities' direct infringement of Plaintiffs' copyright in the Standards.

60. Defendant has contributorily infringed Plaintiffs' copyright in the Standards by intentionally inducing and/or encouraging others to directly infringe upon same.

61. Defendant has knowingly, willfully and deliberately contributorily infringed Plaintiffs' copyright in the Standards, and continues to do so.

62. Plaintiffs have suffered and continue to suffer damages as a result of Defendant's actions, in an amount to be proven at trial.

63. During the period in which Defendant's activities continue, Plaintiffs have no adequate remedy at law for the injuries continued to be inflicted by Defendant.

RELIEF REQUESTED

WHEREFORE, Plaintiffs, AERA, APA and NCME, request the following relief:

- A. Judgment in Plaintiffs' favor and against Defendant;
- B. An injunction preliminarily and permanently enjoining and restraining Defendant, including its officers, directors, agents, employees, representatives, and all persons acting in concert with Defendant to (i) remove all infringing copies of Plaintiffs' Standards from websites and any other locations under Defendant's dominion and control; (ii) cease providing any members of the public with access to Plaintiffs' Standards unless it is with Plaintiffs' express written authorization and permission; and (iii) cease engaging in further acts constituting copyright infringement and/or contributory copyright infringement of Plaintiffs' Standards, pursuant to 17 U.S.C. § 502.
- C. The impoundment and (where applicable) destruction of (i) all infringing copies of Plaintiffs' Standards made or used by Defendant in violation of Plaintiffs' copyright in the

Standards, (ii) all articles by means of which such infringing copies may be or have been reproduced, and (iii) all records documenting the manufacture, sale, or receipt of things involved in any such violation, provided that any records seized shall be taken into the custody of the court, pursuant to 17 U.S.C. §§ 503(a) and (b).

- D. An award of Plaintiffs' costs and attorneys' fees, pursuant to 17 U.S.C. § 505.
- E. Such other and further relief as the Court may deem just and proper.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, LLP

By: /s/ Jonathan Hudis
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Kathleen Cooney-Porter (DC Bar # 434526)
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Attorneys for Plaintiffs

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ASSOCIATION, INC.
AMERICAN PSYCHOLOGICAL
ASSOCIATION, INC.
NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION, INC.

JH:KCP:jh {10259179_1.DOCX}

Dated: May 23, 2014

Exhibit A

FORM TX
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

107028275



TX 5-100-196



(TX)

TXU

EFFECTIVE DATE OF REGISTRATION

12 8 99
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼

Standards for Educational and Psychological Testing

PREVIOUS OR ALTERNATIVE TITLES ▼

N/A

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work ▼**

N/A

If published in a periodical or serial give: **Volume ▼**

Number ▼

Issue Date ▼

On Pages ▼

N/A

2 a NAME OF AUTHOR ▼

American Educational Research Association

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

N/A

N/A

Was this contribution to the work a
"work made for hire"? ☒ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ► USA

Domiciled in ►

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ No

Pseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP

Briefly describe nature of the material created by this author in which copyright is claimed. ▼

b NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a
"work made for hire"? ☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ►

Domiciled in ►

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☐ No

Pseudonymous? ☐ Yes ☐ No

If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP

Briefly describe nature of the material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a
"work made for hire"? ☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ►

Domiciled in ►

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☐ No

Pseudonymous? ☐ Yes ☐ No

If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP

Briefly describe nature of the material created by this author in which copyright is claimed. ▼

3 YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases.

1999

Year

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ►

November

Day ►

8

Year ►

1999

USA

Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

American Educational Research Association

1230 17th St., NW

Washington, DC 20036

APPLICATION RECEIVED
DEC 08, 1999

ONE DEPOSIT RECEIVED

TWO DEPOSITS RECEIVED
DEC 08, 1999

REMITTANCE NUMBER AND DATE

TRANSFER If the claimant(s) named here in space 4 are different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

MORE ON BACK ►

- Complete all applicable spaces (numbers 5-11) on the reverse side of this page.
- See detailed instructions.
- Sign the form at line 10.

DO NOT WRITE HERE

Page 1 of 2

JA2173

EXAMINED BY

FORM TX

CHECKED BY

☐ CORRESPONDENCE
Yes

FOR
COPYRIGHT
OFFICE
USE
ONLY

☐ DEPOSIT ACCOUNT
FUNDS USED

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box) ▼

☐ This is the first published edition of a work previously registered in unpublished form.

☐ This is the first application submitted by this author as copyright claimant.

☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▼

Year of Registration ▼

DERIVATIVE WORK OR COMPILATION Complete both space 6a & 6b for a derivative work; complete only 6b for a compilation.

a. **Preexisting Material** Identify any preexisting work or works that this work is based on or incorporates. ▼

b. **Material Added to This Work** Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

MANUFACTURERS AND LOCATIONS If this is a published work consisting preponderantly of nondramatic literary material in English, the law may require that the copies be manufactured in the United States or Canada for full protection. If so, the names of the manufacturers who performed certain processes, and the places where these processes were performed must be given. See instructions for details.

Names of Manufacturers ▼

Places of Manufacture ▼

REPRODUCTION FOR USE OF BLIND OR PHYSICALLY HANDICAPPED INDIVIDUALS

A signature on this form at space 10, and a check in one of the boxes here in space 8, constitutes a non-exclusive grant of permission to the Library of Congress to reproduce and distribute solely for the blind and physically handicapped and under the conditions and limitations prescribed by the regulations of the Copyright Office: (1) copies of the work identified in space 1 of this application in Braille (or similar tactile symbols); or (2) phonorecords embodying a fixation of a reading of that work; or (3) both.

a ☒ Copies and Phonorecords

b ☐ Copies Only

c ☐ Phonorecords Only

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

American Educational Research Association

DAO 31143

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/Zip ▼

Camille S. Coy

1230 17th St., NW

Washington, DC 20036

Area Code & Telephone Number ▶ 202-223-9485

CERTIFICATION* I, the undersigned, hereby certify that I am the

Check one ▶

- ☐ author
☐ other copyright claimant
☐ owner of exclusive right(s)

☒ authorized agent of AERA

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this is a published work, this date must be the same as or later than the date of publication given in space 3.

Camille S. Coy

date ▶ 12/3/99

Handwritten signature (X) ▼

MAIL
CERTI-
FICATE TO

Certificate
will be
mailed in
window
envelope

Name ▼

American Educational Research Association

Number/Street/Apartment Number ▼

1230 17th St., NW

City/State/ZIP ▼

Washington, DC 20036

Have you:

- Completed all necessary spaces?
- Signed your application in space 10?
- Enclosed check or money order for \$10 payable to Register of Copyrights?
- Enclosed your deposit material with the application and fee?

MAIL TO: Register of Copyrights,
Library of Congress, Washington,
D.C. 20559.

* 17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

Exhibit B



This Certificate issued under the seal of the Copyright Office in accordance with title 17, *United States Code*, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Maria A. Pallante

Register of Copyrights, United States of America



TX 6-484-609



TX TXI PA PAU VA VAU BR BRU RE
 EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

2 25 2014
 Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work
 Standards for Educational and Psychological Testing

Registration Number of the Basic Registration
 TX 5-100-198

Year of Basic Registration
 1999

Name(s) of Author(s)
 American Educational Research Association

Name(s) of Copyright Claimant(s)
 American Educational Research Association

B

Location and Nature of Incorrect Information in Basic Registration

Line Number 2b Line Heading or Description Name of Author

Incorrect Information as it Appears in Basic Registration

Blank

Corrected Information

American Psychological Association

Explanation of Correction

This book had three authors, but only one was included in the original filing.

C

Location and Nature of Information in Basic Registration to be Amplified

Line Number 3a Line Heading or Description Copyright Claimant(s)

Amplified Information and Explanation of Information

The address of the claimant listed has changed to:

American Educational Research Association
 1430 K Street NW, Suite 1200
 Washington, DC 20006

NOTE ON BACK
 • Complete all applicable spaces (D-G) on the reverse side of this page.
 • See detailed instructions. • Sign this form at Space F.

DO NOT WRITE HERE
 Page 1 of 2 pages

JA2176

FORM CA RECEIVED

FORM CA

FUNDS RECEIVED DATE

EXAMINED BY

KOKA

CORRESPONDENCE

FOR
COPYRIGHT
OFFICE
USE
ONLY

REFERENCE TO THIS REGISTRATION ADDED TO
BASIC REGISTRATION ☒ YES ☐ NO

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of ☒ Part B or ☐ Part C

Line 2c was blank, but should have included the third author: National Council on Measurement in Education

Line 4 listed one copyright claimant: American Educational Research Association. Line 4 should have listed 3 copyright claimants as listed below:

American Educational Research Association
1430 K Street, NW
Suite 1200
Washington, DC 20005

American Psychological Association
750 First Street NE
Washington, DC 20002-4242

National Council on Measurement in Education
2424 American Lane
Madison, WI 53704

Correspondence Give name and address to which correspondence about this application should be sent.

John Nelkirk, 1430 K Street, NW
Suite 1200
Washington, DC 20005

Phone (202) 238-3238

Fax (202) 238-3260

Email jnelkirk@aera.net

Deposit Account If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification I, the undersigned, hereby certify that I am the: (Check only one)

☐ author

☐ owner of exclusive right(s)

☐ other copyright claimant

☒ duly authorized agent of

American Educational Research Association

Name of author or other copyright claimant, or owner of exclusive right(s) &
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name

John Nelkirk

Date

2/24/2014

Handwritten signature

John Nelkirk

Certificate
will be
mailed in
window
envelope
to this
address:

Name

John Nelkirk, American Educational Research Association

Number/Street/Apt

1430 K Street NW, Suite 1200

City/State/Zip

Washington, DC 20005

• Complete all necessary spaces.
• Sign your application in space F.

1. Application form
2. Nonrefundable filing fee is due to
receive your papers to Register of
Copyrights

Library of Congress
Copyright Office
101 Independence Avenue SE
Washington, DC 20540-4000

*17 USC 405: Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$5,000.

Form CA-PUB : Rev 07/2008 Pub: 07/2008—500 Printed on recycled paper

U.S. Government Printing Office: 2008-500-000-000

JA2177

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN EDUCATIONAL RESEARCH)
ASSOCIATION, INC.)
1430 K Street, NW)
Suite 1200)
Washington, DC 20005,)

AMERICAN PSYCHOLOGICAL)
ASSOCIATION, INC.)
750 First Street NE)
Washington, DC 20002-4242, and)

NATIONAL COUNCIL ON)
MEASUREMENT IN EDUCATION, INC.)
2424 American Lane)
Madison, WI 53704,)

Plaintiffs,)

v.)

PUBLIC.RESOURCE.ORG, INC.)
1005 Gravenstein Highway North)
Sebastopol, CA 95472,)

Defendant.)

Civil Action No. _____

**PLAINTIFFS' DISCLOSURE
OF CORPORATE AFFILIATIONS
AND FINANCIAL INTERESTS**

I, the undersigned, counsel of record for Plaintiffs, the American Educational Research Association, Inc., the American Psychological Association, Inc. and the National Council on Measurement in Education, Inc., certify that to the best of my knowledge and belief, none of the Plaintiffs have companies, subsidiaries or affiliates which have any outstanding securities in the hands of the public.

These representations are made in order that judges of this Court may determine the need for recusal.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, LLP

By: s/ Jonathan Hudis
Jonathan Hudis (DC Bar # 418872)
Kathleen Cooney-Porter (DC Bar # 434526)
1940 Duke Street
Alexandria, VA 22314
Tel. (703) 413-3000
Fax (703) 413-2220
E-Mail jhudis@oblon.com
E-Mail kcooney-porter@oblon.com

Attorneys for Plaintiffs

AMERICAN EDUCATIONAL RESEARCH
ASSOCIATION, INC.
AMERICAN PSYCHOLOGICAL
ASSOCIATION, INC.
NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION, INC.

JH:KCP:jh {10259444_1.DOCX}

Dated: May 23, 2014

CIVIL COVER SHEET

JS-44 (Rev. 7/13 DC)

I. (a) PLAINTIFFS American Educational Research Association, Inc.; American Psychological Association, Inc.; National Council on Measurement in Education, Inc.		DEFENDANTS Public.Resource.Org, Inc. 1005 Gravenstein Highway North Sebastapol, CA 95472	
(b) COUNTY OF RESIDENCE OF FIRST LISTED PLAINTIFF <u>11001</u> (EXCEPT IN U.S. PLAINTIFF CASES)		COUNTY OF RESIDENCE OF FIRST LISTED DEFENDANT <u>88888</u> (IN U.S. PLAINTIFF CASES ONLY) <small>NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT OF LAND INVOLVED</small>	
(c) ATTORNEYS (FIRM NAME, ADDRESS, AND TELEPHONE NUMBER) Jonathan Hudis, Kathleen Cooney-Porter Oblon, Spivak, McClelland, Maier & Neustadt L.L.P. 1940 Duke Street Alexandria, VA 22314 703-413-3000		ATTORNEYS (IF KNOWN)	

II. BASIS OF JURISDICTION (PLACE AN x IN ONE BOX ONLY)	III. CITIZENSHIP OF PRINCIPAL PARTIES (PLACE AN x IN ONE BOX FOR PLAINTIFF AND ONE BOX FOR DEFENDANT) FOR DIVERSITY CASES ONLY!																				
<table style="width: 100%;"> <tr> <td style="width: 50%;"> <input type="radio"/> 1 U.S. Government Plaintiff </td> <td style="width: 50%;"> <input checked="" type="radio"/> 3 Federal Question (U.S. Government Not a Party) </td> </tr> <tr> <td> <input type="radio"/> 2 U.S. Government Defendant </td> <td> <input type="radio"/> 4 Diversity (Indicate Citizenship of Parties in item III) </td> </tr> </table>	<input type="radio"/> 1 U.S. Government Plaintiff	<input checked="" type="radio"/> 3 Federal Question (U.S. Government Not a Party)	<input type="radio"/> 2 U.S. Government Defendant	<input type="radio"/> 4 Diversity (Indicate Citizenship of Parties in item III)	<table style="width: 100%;"> <tr> <th style="text-align: center;">PTF</th> <th style="text-align: center;">DFT</th> <th style="text-align: center;">PTF</th> <th style="text-align: center;">DFT</th> </tr> <tr> <td>Citizen of this State</td> <td style="text-align: center;"><input checked="" type="radio"/> 1</td> <td style="text-align: center;"><input type="radio"/> 1</td> <td>Incorporated or Principal Place of Business in This State</td> </tr> <tr> <td>Citizen of Another State</td> <td style="text-align: center;"><input type="radio"/> 2</td> <td style="text-align: center;"><input checked="" type="radio"/> 2</td> <td>Incorporated and Principal Place of Business in Another State</td> </tr> <tr> <td>Citizen or Subject of a Foreign Country</td> <td style="text-align: center;"><input type="radio"/> 3</td> <td style="text-align: center;"><input type="radio"/> 3</td> <td>Foreign Nation</td> </tr> </table>	PTF	DFT	PTF	DFT	Citizen of this State	<input checked="" type="radio"/> 1	<input type="radio"/> 1	Incorporated or Principal Place of Business in This State	Citizen of Another State	<input type="radio"/> 2	<input checked="" type="radio"/> 2	Incorporated and Principal Place of Business in Another State	Citizen or Subject of a Foreign Country	<input type="radio"/> 3	<input type="radio"/> 3	Foreign Nation
<input type="radio"/> 1 U.S. Government Plaintiff	<input checked="" type="radio"/> 3 Federal Question (U.S. Government Not a Party)																				
<input type="radio"/> 2 U.S. Government Defendant	<input type="radio"/> 4 Diversity (Indicate Citizenship of Parties in item III)																				
PTF	DFT	PTF	DFT																		
Citizen of this State	<input checked="" type="radio"/> 1	<input type="radio"/> 1	Incorporated or Principal Place of Business in This State																		
Citizen of Another State	<input type="radio"/> 2	<input checked="" type="radio"/> 2	Incorporated and Principal Place of Business in Another State																		
Citizen or Subject of a Foreign Country	<input type="radio"/> 3	<input type="radio"/> 3	Foreign Nation																		

IV. CASE ASSIGNMENT AND NATURE OF SUIT
 (Place an X in one category, A-N, that best represents your Cause of Action and one in a corresponding Nature of Suit)

<input type="radio"/> A. Antitrust <input type="checkbox"/> 410 Antitrust	<input type="radio"/> B. Personal Injury/Malpractice <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Federal Employers Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury <input type="checkbox"/> 362 Medical Malpractice <input type="checkbox"/> 365 Product Liability <input type="checkbox"/> 367 Health Care/Pharmaceutical Personal Injury Product Liability <input type="checkbox"/> 368 Asbestos Product Liability	<input type="radio"/> C. Administrative Agency Review <input type="checkbox"/> 151 Medicare Act <u>Social Security</u> <input type="checkbox"/> 861 HIA (1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW (405(g)) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RSI (405(g)) <u>Other Statutes</u> <input type="checkbox"/> 891 Agricultural Acts <input type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 890 Other Statutory Actions (If Administrative Agency is Involved)	<input type="radio"/> D. Temporary Restraining Order/Preliminary Injunction Any nature of suit from any category may be selected for this category of case assignment. *(If Antitrust, then A governs)*
---	--	--	--

<input checked="" type="radio"/> E. General Civil (Other)	<input type="radio"/> F. Pro Se General Civil
--	--

<u>Real Property</u> <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent, Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property <u>Personal Property</u> <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability	<u>Bankruptcy</u> <input type="checkbox"/> 422 Appeal 27 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 <u>Prisoner Petitions</u> <input type="checkbox"/> 535 Death Penalty <input type="checkbox"/> 540 Mandamus & Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Conditions <input type="checkbox"/> 560 Civil Detainee - Conditions of Confinement <u>Property Rights</u> <input checked="" type="checkbox"/> 820 Copyrights <input type="checkbox"/> 830 Patent <input type="checkbox"/> 840 Trademark <u>Federal Tax Suits</u> <input type="checkbox"/> 870 Taxes (US plaintiff or defendant) <input type="checkbox"/> 871 IRS-Third Party 26 USC 7609	<u>Forfeiture/Penalty</u> <input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881 <input type="checkbox"/> 690 Other <u>Other Statutes</u> <input type="checkbox"/> 375 False Claims Act <input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 430 Banks & Banking <input type="checkbox"/> 450 Commerce/ICC Rates/etc. <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 462 Naturalization Application <input type="checkbox"/> 465 Other Immigration Actions <input type="checkbox"/> 470 Racketeer Influenced & Corrupt Organization	<input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Satellite TV <input type="checkbox"/> 850 Securities/Commodities/Exchange <input type="checkbox"/> 896 Arbitration <input type="checkbox"/> 899 Administrative Procedure Act/Review or Appeal of Agency Decision <input type="checkbox"/> 950 Constitutionality of State Statutes <input type="checkbox"/> 890 Other Statutory Actions (if not administrative agency review or Privacy Act)
---	--	--	---

JA2181

<input type="radio"/> G. Habeas Corpus/ 2255 <input type="checkbox"/> 530 Habeas Corpus – General <input type="checkbox"/> 510 Motion/Vacate Sentence <input type="checkbox"/> 463 Habeas Corpus – Alien Detainee	<input type="radio"/> H. Employment Discrimination <input type="checkbox"/> 442 Civil Rights – Employment (criteria: race, gender/sex, national origin, discrimination, disability, age, religion, retaliation) <i>*(If pro se, select this deck)*</i>	<input type="radio"/> I. FOIA/Privacy Act <input type="checkbox"/> 895 Freedom of Information Act <input type="checkbox"/> 890 Other Statutory Actions (if Privacy Act) <i>*(If pro se, select this deck)*</i>	<input type="radio"/> J. Student Loan <input type="checkbox"/> 152 Recovery of Defaulted Student Loan (excluding veterans)
<input type="radio"/> K. Labor/ERISA (non-employment) <input type="checkbox"/> 710 Fair Labor Standards Act <input type="checkbox"/> 720 Labor/Mgmt. Relations <input type="checkbox"/> 740 Labor Railway Act <input type="checkbox"/> 751 Family and Medical Leave Act <input type="checkbox"/> 790 Other Labor Litigation <input type="checkbox"/> 791 Empl. Ret. Inc. Security Act	<input type="radio"/> L. Other Civil Rights (non-employment) <input type="checkbox"/> 441 Voting (if not Voting Rights Act) <input type="checkbox"/> 443 Housing/Accommodations <input type="checkbox"/> 440 Other Civil Rights <input type="checkbox"/> 445 Americans w/Disabilities – Employment <input type="checkbox"/> 446 Americans w/Disabilities – Other <input type="checkbox"/> 448 Education	<input type="radio"/> M. Contract <input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholder's Suits <input type="checkbox"/> 190 Other Contracts <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise	<input type="radio"/> N. Three-Judge Court <input type="checkbox"/> 441 Civil Rights – Voting (if Voting Rights Act)

V. ORIGIN
☒ 1 Original Proceeding
☐ 2 Removed from State Court
☐ 3 Remanded from Appellate Court
☐ 4 Reinstated or Reopened
☐ 5 Transferred from another district (specify)
☐ 6 Multi-district Litigation
☐ 7 Appeal to District Judge from Mag. Judge

VI. CAUSE OF ACTION (CITE THE U.S. CIVIL STATUTE UNDER WHICH YOU ARE FILING AND WRITE A BRIEF STATEMENT OF CAUSE.)
Copyright Infringement and Contributory Copyright Infringement; 17 U.S.C. §§ 101 et seq.

VII. REQUESTED IN COMPLAINT

CHECK IF THIS IS A CLASS ACTION UNDER F.R.C.P. 23 ☐

DEMAND \$
JURY DEMAND:

Check YES only if demanded in complaint
YES ☐ NO ☒

VIII. RELATED CASE(S) IF ANY

(See instruction)

YES ☐ NO ☒

If yes, please complete related case form

DATE: May 23, 2014

SIGNATURE OF ATTORNEY OF RECORD: Jonathan Hudis

INSTRUCTIONS FOR COMPLETING CIVIL COVER SHEET JS-44
Authority for Civil Cover Sheet

The JS-44 civil cover sheet and the information contained herein neither replaces nor supplements the filings and services of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. Consequently, a civil cover sheet is submitted to the Clerk of Court for each civil complaint filed. Listed below are tips for completing the civil cover sheet. These tips coincide with the Roman Numerals on the cover sheet.

- I.** COUNTY OF RESIDENCE OF FIRST LISTED PLAINTIFF/DEFENDANT (b) County of residence: Use 11001 to indicate plaintiff if resident of Washington, DC, 88888 if plaintiff is resident of United States but not Washington, DC, and 99999 if plaintiff is outside the United States.
- III.** CITIZENSHIP OF PRINCIPAL PARTIES: This section is completed only if diversity of citizenship was selected as the Basis of Jurisdiction under Section II.
- IV.** CASE ASSIGNMENT AND NATURE OF SUIT: The assignment of a judge to your case will depend on the category you select that best represents the primary cause of action found in your complaint. You may select only one category. You must also select one corresponding nature of suit found under the category of the case.
- VI.** CAUSE OF ACTION: Cite the U.S. Civil Statute under which you are filing and write a brief statement of the primary cause.
- VIII.** RELATED CASE(S), IF ANY: If you indicated that there is a related case, you must complete a related case form, which may be obtained from the Clerk's Office.

Because of the need for accurate and complete information, you should ensure the accuracy of the information provided prior to signing the form.

UNITED STATES DISTRICT COURT

for the

District of Columbia

American Educational Research Association, Inc.,
et al.

Plaintiff

v.

Public.Resource.Org, Inc.

Defendant

Civil Action No.

SUMMONS IN A CIVIL ACTION

To: *(Defendant's name and address)* Public.Resource.Org, Inc.
1005 Gravenstein Highway North
Sebastapol, CA 95472

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

Jonathan Hudis, Kathleen Cooney-Porter
Oblon, Spivak, McClelland, Maier & Neustadt L.L.P.
1940 Duke Street
Alexandria, VA 22314
703-413-3000

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

ANGELA D. CAESAR, CLERK OF COURT

Date: _____

Signature of Clerk or Deputy Clerk

Civil Action No. _____

PROOF OF SERVICE

(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))

This summons for *(name of individual and title, if any)* _____
was received by me on *(date)* _____.

☐ I personally served the summons on the individual at *(place)* _____
_____ on *(date)* _____; or

☐ I left the summons at the individual's residence or usual place of abode with *(name)* _____
_____, a person of suitable age and discretion who resides there,
on *(date)* _____, and mailed a copy to the individual's last known address; or

☐ I served the summons on *(name of individual)* _____, who is
designated by law to accept service of process on behalf of *(name of organization)* _____
_____ on *(date)* _____; or

☐ I returned the summons unexecuted because _____; or

☐ Other *(specify)*: _____.

My fees are \$ _____ for travel and \$ _____ for services, for a total of \$ _____ 0.00.

I declare under penalty of perjury that this information is true.

Date: _____

Server's signature

Printed name and title

Server's address

Additional information regarding attempted service, etc:

JA2184

TO: Register of Copyrights Copyright Office Library of Congress Washington, D.C. 20559	REPORT ON THE FILING OR DETERMINATION OF AN ACTION OR APPEAL REGARDING A COPYRIGHT
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In compliance with the provisions of 17 U.S.C. 508, you are hereby advised that a court action or appeal has been filed on the following copyright(s):

<input checked="" type="checkbox"/> ACTION <input type="checkbox"/> APPEAL		COURT NAME AND LOCATION United States District Court for The District of Columbia 333 Constitution Ave. N.W. Washington, D.C. 20001
DOCKET NO.	DATE FILED 5/23/2014	
PLAINTIFF American Educational Research Association, Inc.; American Psychological Association, Inc.; National Council on Measurement in Education, Inc.		DEFENDANT Public.Resource.Org, Inc. 1005 Gravenstein Highway North Sebastapol, CA 95472
COPYRIGHT REGISTRATION NO.	TITLE OF WORK	AUTHOR OR WORK
1 TX 5-100-196	Standards for Educational and Psychological Testing	AERA; APA; NCME
2		
3		
4		
5		

In the above-entitled case, the following copyright(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading			
COPYRIGHT REGISTRATION NO.	TITLE OF WORK	AUTHOR OF WORK		
1				
2				
3				

In the above-entitled case, a final decision was rendered on the date entered below. A copy of the order or judgment together with the written opinion, if any, of the court is attached.

COPY ATTACHED <input type="checkbox"/> Order <input type="checkbox"/> Judgment	WRITTEN OPINION ATTACHED <input type="checkbox"/> Yes <input type="checkbox"/> No	DATE RENDERED
CLERK	(BY) DEPUTY CLERK	DATE

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN EDUCATIONAL RESEARCH)	
ASSOCIATION, INC., AMERICAN)	
PSYCHOLOGICAL ASSOCIATION, INC.,)	
and NATIONAL COUNCIL ON)	
MEASUREMENT IN EDUCATION, INC.,	)	Civil Action No. 1:14-cv-00857-CRC
)	
Plaintiffs/Counterclaim-Defendants,	)	PLAINTIFFS' REPLY AND
	)	AFFIRMATIVE DEFENSES TO
v.	)	DEFENDANT'S COUNTERCLAIM
	)	FOR DECLARATORY RELIEF
PUBLIC.RESOURCE.ORG, INC.,)	
)	
Defendant/Counterclaim-Plaintiff.)	
)	

Plaintiffs/Counterclaim-Defendants, American Educational Research Association, Inc. ("AERA"), American Psychological Association, Inc. ("APA"), and National Council on Education Measurement in Education, Inc. ("NCME") (collectively, "Plaintiffs"), as and for their Reply and Affirmative Defenses to the Counterclaim for Declaratory Relief of Defendant/Counterclaim-Plaintiff, Public.Resource.Org, Inc. ("Public Resource" or "Defendant"), responds as follows:

Definitions

A. As used herein, the term "1999 Standards" shall mean the 1999 edition of the *Standards for Educational and Psychological Testing*.

B. As used herein, the term "1985 Standards" shall mean the 1985 edition of the *Standards for Educational and Psychological Testing*.

Responses to Counterclaim

Introduction

1. Plaintiffs admit that Public Resource has posted numerous copyrighted standards

and codes on websites under its dominion and control. Plaintiffs otherwise lack information sufficient to form a belief as to the remaining allegations contained in paragraph 1 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

2. Plaintiffs generally admit that federal, state and local governments within the United States promulgate regulations. Plaintiffs otherwise do not understand what Public Resource means by the term "fundamental component," and therefore deny the remaining allegations contained in paragraph 2 of Public Resource's Counterclaim, leaving Defendant to its proofs.

3. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 3 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

4. Plaintiffs deny the allegations contained in paragraph 4 of Public Resource's Counterclaim.

5. Plaintiffs admit that the Code of Federal Regulations cited by Public Resource in paragraph 5 of Public Resource's Counterclaim state that the 1999 Standards are incorporated by reference within those Code provisions. Plaintiffs otherwise deny the allegations contained in paragraph 5 of Public Resource's Counterclaim.

6. Plaintiffs admit that the state code or rule provisions cited by Public Resource in paragraph 6 of Public Resource's Counterclaim state that the 1999 Standards are incorporated by reference within those code provisions. Plaintiffs otherwise deny the allegations contained in paragraph 5 of Public Resource's Counterclaim.

7. Plaintiffs admit the allegations contained in paragraph 7 of Public Resource's Counterclaim.

8. Plaintiffs admit that they own the copyright in the 1999 Standards. Plaintiffs otherwise do not understand what Public Resource means by the term “privileged relationship,” and therefore deny the remaining allegations contained in paragraph 8 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

9. Plaintiffs admit that they own the copyright in the 1999 Standards. Plaintiffs otherwise do not understand what Public Resource means by the term “privileged relationship,” and therefore deny the remaining allegations contained in paragraph 9 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

10. Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.* Plaintiffs otherwise do not understand what Public Resource means by the term “lawful opportunity,” and therefore deny the remaining allegations contained in paragraph 10 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

11. Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.* Plaintiffs otherwise do not understand what Public Resource means by the term “lawful opportunity,” and therefore deny the remaining allegations contained in paragraph 11 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

12. Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.* Plaintiffs otherwise do not understand what Public Resource means by the term “lawful opportunity,” and therefore deny the remaining allegations contained in paragraph 12 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

13. Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.* Plaintiffs otherwise do not understand what Public Resource means by the terms “lawful opportunity,” “certain activities,” and “gatekeepers,” and therefore deny the remaining allegations contained in paragraph 13 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

14. Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.* – including the right to set the conditions under which the public may use the 1999 Standards consistent with the rights afforded by the U.S. Copyright Act. Plaintiffs otherwise do not understand what Public Resource means by the terms “have access” and “gain certain rights,” and therefore deny the remaining allegations contained in paragraph 14 of Public Resource’s Counterclaim, leaving Defendant to its proofs.

15. The allegations contained in paragraph 15 of Public Resource’s Counterclaim are legal conclusions to which no response is required. Plaintiffs otherwise do not understand what Public Resource means by the term “content of law” and therefore deny the remaining allegations contained in paragraph 15 of Public Resource’s Counterclaim, leaving Defendant to its proofs. By way of further answer, Plaintiffs provide the public with access to the 1999 Standards, such that no action by Public Resource is required to provide the public with access to the 1999 Standards.

16. The allegations contained in paragraph 16 of Public Resource’s Counterclaim are legal conclusions to which no response is required. Plaintiffs otherwise do not understand what Public Resource means by the term “content of law” and therefore deny the remaining

allegations contained in paragraph 16 of Public Resource's Counterclaim, leaving Defendant to its proofs. By way of further answer, Plaintiffs provide the public with access to the 1999 Standards, such that no action by Public Resource is required to provide the public with access to the 1999 Standards.

17. The allegations contained in paragraph 17 of Public Resource's Counterclaim are legal conclusions to which no response is required. By way of further answer, Plaintiffs admit that, as owner of the copyright in the 1999 Standards, they are endowed with the benefits and privileges of copyright protection to that work under the U.S. Copyright Act, 17 U.S.C. §§ 101 *et seq.*

18. Plaintiffs admit the allegations contained in paragraph 18 of Public Resource's Counterclaim.

19. Plaintiffs admit that U.S. copyright law gives Plaintiffs the power to determine the conditions under which Public Resource and others may access, reproduce, publish, translate, reformat or annotate the Standards, or enable others to do so. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 19 of Public Resource's Counterclaim.

Parties

20. Upon information and belief, Plaintiffs admit the allegations contained in paragraph 20 of Public Resource's Counterclaim.

21. Plaintiffs admit the allegations contained in paragraph 21 of Public Resource's Counterclaim.

22. Plaintiffs admit the allegations contained in paragraph 22 of Public Resource's Counterclaim.

23. Plaintiffs admit the allegations contained in paragraph 23 of Public Resource's

Counterclaim.

Jurisdiction and Venue

24. Plaintiffs admit that Public Resource's Counterclaim purports to seek declaratory relief pursuant to 28 U.S.C. § 2201 and 17 U.S.C. §§ 101 *et seq.*, and admits that the Court has subject matter jurisdiction over the Counterclaim. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 24 of Public Resource's Counterclaim.

25. Plaintiffs admit that AERA and APA maintain offices in Washington, D.C., that all of the Plaintiffs transact business in this District, and that the Court has personal jurisdiction over each of the Plaintiffs. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 25 of Public Resource's Counterclaim.

26. Plaintiffs admit that they have submitted to the Court's jurisdiction over each of them for purposes of this case by filing their Complaint against Public Resource in this Court. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 26 of Public Resource's Counterclaim.

27. Plaintiffs admit that venue is proper in this Court, that AERA and APA maintain offices in Washington, D.C., and that Plaintiffs filed their Complaint against Public Resource in this Court. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 27 of Public Resource's Counterclaim.

Facts

I. Public Resource's Operations

28. Plaintiffs admit that Public Resource is a California not-for-profit corporation. Plaintiffs otherwise lack information sufficient to form a belief as to the allegations contained in paragraph 28 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to

its proofs.

29. Plaintiffs lack information sufficient to form a belief as to the allegations concerning Public Resource contained in paragraph 29 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs. Plaintiffs otherwise admit the allegations contained in paragraph 29 of Public Resource's Counterclaim.

30. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 30 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

31. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 31 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

32. Plaintiffs admit the allegations contained in paragraph 32 of Public Resource's Counterclaim.

33. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 33 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

34. Plaintiffs do not understand what Public Resource means by the term "hosts standards" and therefore deny the allegations contained in paragraph 34 of Public Resource's Counterclaim, leaving Defendant to its proofs.

35. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 35 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

36. Plaintiffs lack information sufficient to form a belief as to the allegations

contained in paragraph 36 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

37. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 37 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

38. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 38 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

39. Plaintiffs deny the allegations contained in paragraph 39 of Public Resource's Counterclaim.

40. Plaintiffs deny the allegations contained in paragraph 40 of Public Resource's Counterclaim.

41. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 41 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

42. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 42 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

43. Plaintiffs admit the allegations contained in paragraph 43 of Public Resource's Counterclaim.

44. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 44 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

II. Plaintiffs' Operations

45. Plaintiffs admit the allegations contained in paragraph 45 of Public Resource's Counterclaim.

46. Plaintiffs admit the allegations contained in paragraph 46 of Public Resource's Counterclaim.

47. Plaintiffs admit the allegations contained in paragraph 47 of Public Resource's Counterclaim.

48. Plaintiffs admit that their development of the 1999 Standards reduces duplication of effort for test writers. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 48 of Public Resource's Counterclaim.

49. Plaintiffs admit the allegations contained in paragraph 49 of Public Resource's Counterclaim.

50. Plaintiffs admit the allegations contained in paragraph 50 of Public Resource's Counterclaim.

51. Plaintiffs admit the allegations contained in paragraph 51 of Public Resource's Counterclaim.

52. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 52 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

53. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 52 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

54. Plaintiffs admit that they update the *Standards for Educational and Psychological*

Testing periodically. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 54 of Public Resource's Counterclaim.

55. Plaintiffs admit that Public Resource published the entirety of the 1999 Standards to Public Resource's <https://law.resource.org> website. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 55 of Public Resource's Counterclaim.

56. Plaintiffs admit that the U.S. Department of Education has referenced the 1999 Standards in Title 34 of the U.S. Code of Federal Regulations. Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 56 of Public Resource's Counterclaim.

57. Plaintiffs admit the allegations contained in paragraph 57 of Public Resource's Counterclaim.

58. Plaintiffs do not understand what Public Resource means by the phrase "is not incorporated into federal regulations," and therefore deny the allegations contained in paragraph 58 of Public Resource's Counterclaim, leaving Defendant to its proofs.

59. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 59 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

60. Plaintiffs deny the allegations contained in paragraph 60 of Public Resource's Counterclaim.

61. Plaintiffs admit the allegations contained in paragraph 61 of Public Resource's Counterclaim.

62. Plaintiffs admit the allegations contained in paragraph 62 of Public Resource's Counterclaim.

63. Plaintiffs admit the allegations contained in paragraph 63 of Public Resource's

Counterclaim.

64. Plaintiff AERA admits the allegations contained in paragraph 64 of Public Resource's Counterclaim.

65. Plaintiff APA admits the allegations contained in paragraph 65 of Public Resource's Counterclaim.

66. Plaintiff NCME admits the allegations contained in paragraph 66 of Public Resource's Counterclaim.

67. Plaintiffs admit that the Federal Register Notice cited by Public Resource in paragraph 67 of Public Resource's Counterclaim state that the 1985 Standards, as amended June 2, 1989, were incorporated by reference into certain Sections of the Code of Federal Regulations. Plaintiffs otherwise deny the allegations contained in paragraph 67 of Public Resource's Counterclaim.

68. Plaintiffs deny the allegations contained in paragraph 68 of Public Resource's Counterclaim.

69. Plaintiff AERA admits that it was aware, prior to the filing of this action, that the 1999 Standards were referenced by the U.S. Department of Education in Title 34 of the U.S. Code of Federal Regulations. Except as specifically admitted, Plaintiff AERA denies the allegations contained in paragraph 69 of Public Resource's Counterclaim.

70. Plaintiff APA admits that it was aware, prior to the filing of this action, that the 1999 Standards were referenced by the U.S. Department of Education in Title 34 of the U.S. Code of Federal Regulations. Except as specifically admitted, Plaintiff APA denies the allegations contained in paragraph 70 of Public Resource's Counterclaim.

71. Plaintiff NCME admits that it was aware, prior to the filing of this action, that the

1999 Standards were referenced by the U.S. Department of Education in Title 34 of the U.S. Code of Federal Regulations. Except as specifically admitted, Plaintiff NCME denies the allegations contained in paragraph 69 of Public Resource's Counterclaim.

72. Plaintiff AERA admits the allegations contained in paragraph 72 of Public Resource's Counterclaim, but denies that making such a request of any U.S. Government entity is an obligation of AERA in maintaining the enforceability of the copyright in the 1999 Standards.

73. Plaintiff APA admits the allegations contained in paragraph 73 of Public Resource's Counterclaim, but denies that making such a request of any U.S. Government entity is an obligation of APA in maintaining the enforceability of the copyright in the 1999 Standards.

74. Plaintiff NCME admits the allegations contained in paragraph 74 of Public Resource's Counterclaim, but denies that making such a request of any U.S. Government entity is an obligation of NCME in maintaining the enforceability of the copyright in the 1999 Standards.

75. Plaintiff AERA admits that it never requested any U.S. Government entity for compensation if and when the Standards were referenced or mentioned in governmental regulations, but denies that making such a request of any U.S. Government entity is an obligation of AERA in maintaining the enforceability of the copyright in the 1999 Standards. Plaintiff AERA otherwise the allegations contained in paragraph 75 of Public Resource's Counterclaim.

76. Plaintiff APA admits that it never requested any U.S. Government entity for compensation if and when the Standards were referenced or mentioned in governmental regulations, but denies that making such a request of any U.S. Government entity is an obligation of APA in maintaining the enforceability of the copyright in the 1999 Standards. Plaintiff APA

otherwise the allegations contained in paragraph 76 of Public Resource's Counterclaim.

77. Plaintiff NCME admits that it never requested any U.S. Government entity for compensation if and when the Standards were referenced or mentioned in governmental regulations, but denies that making such a request of any U.S. Government entity is an obligation of NCME in maintaining the enforceability of the copyright in the 1999 Standards. Plaintiff NCME otherwise the allegations contained in paragraph 77 of Public Resource's Counterclaim.

78. Plaintiff AERA admits that it never protested to any U.S. Government entity if and when the Standards were referenced or mentioned in governmental regulations. Plaintiff AERA does not understand what Public Resource means by the phrase "incorporation of any edition ... into regulations," and therefore denies the allegations contained in paragraph 78 of Public Resource's Counterclaim as stated, leaving Defendant to its proofs. Plaintiff AERA generally denies that making a protest to any U.S. Government entity is an obligation of AERA in maintaining the enforceability of the copyright in the 1999 Standards.

79. Plaintiff APA admits that it never protested to any U.S. Government entity if and when the Standards were referenced or mentioned in governmental regulations. Plaintiff APA does not understand what Public Resource means by the phrase "incorporation of any edition ... into regulations," and therefore denies the allegations contained in paragraph 79 of Public Resource's Counterclaim as stated, leaving Defendant to its proofs. Plaintiff APA generally denies that making a protest to any U.S. Government entity is an obligation of APA in maintaining the enforceability of the copyright in the 1999 Standards.

80. Plaintiff NCME admits that it never protested to any U.S. Government entity if and when the Standards were referenced or mentioned in governmental regulations. Plaintiff NCME does not understand what Public Resource means by the phrase "incorporation of any

edition ... into regulations,” and therefore denies the allegations contained in paragraph 80 of Public Resource’s Counterclaim as stated, leaving Defendant to its proofs. Plaintiff NCME generally denies that making a protest to any U.S. Government entity is an obligation of NCME in maintaining the enforceability of the copyright in the 1999 Standards.

81. Plaintiffs admit that, at one time, the website located at <http://www.teststandards.org> contained an article authored by Wayne Camara which stated that the *Standards for Educational and Psychological Testing* have been “referenced in law and cited in Supreme Court and other judicial decisions lending additional authority to the document.” However, the teststandards.org website was recently updated and no longer contains the Camara article containing the quoted text in question.

III. Standards that the Law (Allegedly) Incorporates

82. The allegations contained in paragraph 82 of Public Resource’s Counterclaim are legal conclusions to which no response is required.

83. Plaintiffs admit that, at 69 Fed. Reg. 39913 at 39914, col. 1 (July 1, 2004), it states: “[t]o the greatest possible degree, the principles and guidelines developed under this goal must be compatible extensions of the Standards for Educational and Psychological Testing.” Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 83 of Public Resource’s Counterclaim.

84. Plaintiffs deny the allegations contained in paragraph 84 of Public Resource’s Counterclaim. By way of further answer, the section of the Minn. Admin Rules cited by Public Resource was repealed.

85. Plaintiffs do not understand what Public Resource means by the phrase “[o]ther regulations, funding opportunities, and Requests for Proposals” and therefore deny the

allegations contained in paragraph 85 of Public Resource's Counterclaim, leaving Defendant to its proofs.

86. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 86 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

87. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 87 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

88. Plaintiffs admit that public comments often are solicited during the process of drafting and adopting statutes and regulations. Plaintiffs otherwise lack information sufficient to form a belief as to the allegations contained in paragraph 88 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

89. Plaintiffs do not understand what Public Resource means by "incorporation of a standard into law," and therefore deny the allegations contained in paragraph 89 of Public Resource's Counterclaim, leaving Defendant to its proofs.

90. Plaintiffs do not understand what Public Resource means by "the incorporation of a standard," and therefore deny the allegations contained in paragraph 90 of Public Resource's Counterclaim, leaving Defendant to its proofs.

91. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 91 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

92. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 92 of Public Resource's Counterclaim, and therefore deny same leaving

Defendant to its proofs.

93. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 93 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs. Plaintiffs cannot purport to answer Public Resource's allegations on behalf of the general public or which relate to some amorphous reference to unknown "laws and regulations."

94. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 94 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs. Plaintiffs cannot purport to answer Public Resource's allegations on behalf of the general public regarding their interest in bias (or lack thereof) in standardized testing.

95. Plaintiffs deny the allegations contained in paragraph 95 of Public Resource's Counterclaim. By way of further answer, Plaintiffs provide the public with access to the 1999 Standards in other ways not mentioned by Public Resource in paragraph 95.

96. Plaintiffs admit the allegations contained in paragraph 96 of Public Resource's Counterclaim.

97. Plaintiffs do not understand what Public Resource means by the phrase "provides access to the contents," and therefore deny the allegations contained in paragraph 97 of Public Resource's Counterclaim leaving Defendant to its proofs. By way of further answer, the unauthorized version of the 1999 Standards published to Public Resource's website was not in electronically searchable format.

98. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 98 of Public Resource's Counterclaim, and therefore deny same leaving

Defendant to its proofs.

99. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 99 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

100. Plaintiffs admit that, in 47 Fed. Reg. 34108 (Aug. 6, 1982), Sec. 51.1(c)(2), it states: incorporation by reference "[i]s not intended to detract from the legal or practical attributes of the system established by the Federal Register Act, the Administrative Procedure Act, the regulations of the Administrative Committee of the Federal Register, and the acts which require publication in the Federal Register." Except as specifically admitted, Plaintiffs deny the allegations contained in paragraph 100 of Public Resource's Counterclaim.

101. Plaintiffs do not understand what Public Resource means by the phrase "charges fees for access," and therefore deny the allegations contained in paragraph 101 of Public Resource's Counterclaim, leaving Defendant to its proofs. By way of further answer, as publisher of record, Plaintiff AERA sells printed copies of the 1999 Standards at retail prices ranging from \$35.95 to \$49.95 per copy, and distributes the net income from these sales to the three copyright owner organizations (i.e., AERA, APA and NCME).

102. Plaintiff AERA does not understand what Public Resource means by the phrase "charges fees for access," and therefore deny the allegations contained in paragraph 102 of Public Resource's Counterclaim, leaving Defendant to its proofs. By way of further answer, as publisher of record, Plaintiff AERA sells printed copies of the 1999 Standards at retail prices ranging from \$35.95 to \$49.95 per copy, and distributes the net income from these sales to the three copyright owner organizations (i.e., AERA, APA and NCME).

103. Plaintiffs admit that, Amazon.com is a re-seller and renter of printed copies of the

1999 Standards, for which Amazon.com sets its own prices. Plaintiffs otherwise lack information sufficient to form a belief as to the allegations contained in paragraph 103 of Public Resource's Counterclaim, leaving Defendant to its proofs.

104. Plaintiffs deny the allegations contained in paragraph 104 of Public Resource's Counterclaim.

105. Plaintiffs deny the allegations contained in paragraph 105 of Public Resource's Counterclaim.

106. Plaintiffs deny the allegations contained in paragraph 106 of Public Resource's Counterclaim.

107. Plaintiffs deny the allegations contained in paragraph 107 of Public Resource's Counterclaim.

108. Plaintiffs deny the allegations contained in paragraph 108 of Public Resource's Counterclaim.

109. Plaintiffs deny the allegations contained in paragraph 109 of Public Resource's Counterclaim.

110. Plaintiffs deny the allegations contained in paragraph 110 of Public Resource's Counterclaim.

111. Plaintiffs deny the allegations contained in paragraph 111 of Public Resource's Counterclaim.

112. Plaintiffs deny the allegations contained in paragraph 112 of Public Resource's Counterclaim.

113. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 113 of Public Resource's Counterclaim, and therefore deny same leaving

Defendant to its proofs.

114. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 114 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

115. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 115 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

COUNT I

[Declaratory Relief Pursuant to 28 U.S.C. § 2201, *et seq.* (Declaratory Judgment Act) and Title 17 U.S.C. (Copyright Act of 1976)]

116. Plaintiffs repeat and reallege paragraphs 1 through 115 above.

117. The allegations contained in paragraph 117 of Public Resource's Counterclaim are legal conclusions to which no response is required.

118. The allegations contained in paragraph 118 of Public Resource's Counterclaim are legal conclusions to which no response is required. By way of a further answer, no action by Public Resource is necessary to provide the public with the ability to read the 1999 Standards.

119. The allegations contained in paragraph 119 of Public Resource's Counterclaim are legal conclusions to which no response is required.

120. The allegations contained in paragraph 120 of Public Resource's Counterclaim are legal conclusions to which no response is required.

121. The allegations contained in paragraph 121 of Public Resource's Counterclaim are legal conclusions to which no response is required.

122. The allegations contained in paragraph 122 of Public Resource's Counterclaim are legal conclusions to which no response is required. By way of a further answer, Plaintiffs

state that OMB Circular A-119 and the October 2, 2013 report of the Office of the Federal Register, National Archives and Records make clear that copyrighted documents do not lose their status and protectable intellectual property through the government action of incorporation by reference.

123. The allegations contained in paragraph 123 of Public Resource's Counterclaim are legal conclusions to which no response is required. By way of a further answer, Plaintiffs state that they own the copyright in the 1999 Standards. Plaintiffs do not lose their copyright protection in the 1999 Standards as a result of incorporation by reference by the government.

124. The allegations contained in paragraph 124 of Public Resource's Counterclaim are legal conclusions to which no response is required.

125. The allegations contained in paragraph 125 of Public Resource's Counterclaim are legal conclusions to which no response is required.

126. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 126 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

127. The allegations contained in the first sentence of paragraph 127 of Public Resource's Counterclaim are legal conclusions to which no response is required. Plaintiffs admit the allegations contained in the second sentence of paragraph 127 of Public Resource's Counterclaim. The allegations contained in the third sentence of paragraph 127 of Public Resource's Counterclaim are legal conclusions to which no response is required. Plaintiffs deny the allegations contained in the fourth sentence of paragraph 127 of Public Resource's Counterclaim.

128. Plaintiffs deny the allegations contained in paragraph 128 of Public Resource's

Counterclaim.

129. Plaintiffs deny the allegations contained in paragraph 129 of Public Resource's Counterclaim.

130. Plaintiffs admit the allegations contained in paragraph 130 of Public Resource's Counterclaim, except deny that Public Resource posted Plaintiffs' 1999 Standard to Defendant's website in a searchable format.

131. Plaintiffs deny the allegations contained in paragraph 131 of Public Resource's Counterclaim.

132. Plaintiffs lack information sufficient to form a belief as to the allegations contained in paragraph 132 of Public Resource's Counterclaim, and therefore deny same leaving Defendant to its proofs.

133. Plaintiffs do not understand what Public Resource means by the term "incorporate into," and therefore deny the allegations contained in paragraph 133 of Public Resource's Counterclaim, leaving Defendant to its proofs. By way of a further answer, Plaintiffs cannot purport to answer Public Resource's allegations on behalf of what some government(s) or government entity(ies) may or may not do in the future with other versions of the *Standards for Educational and Psychological Testing*.

134. The allegations contained in the paragraph 134 of Public Resource's Counterclaim are legal conclusions to which no response is required. By way of a further answer, Plaintiffs do not understand what Public Resource means by the term "incorporated standards," and therefore deny the allegations contained in paragraph 134 of Public Resource's Counterclaim, leaving Defendant to its proofs.

135. The allegations contained in the paragraph 135 of Public Resource's

Counterclaim are legal conclusions to which no response is required.

136. Plaintiffs admit the allegations contained in paragraph 136 of Public Resource's Counterclaim.

137. Plaintiffs deny the allegations contained in paragraph 137 of Public Resource's Counterclaim.

Affirmative Defenses to Counterclaim

First Affirmative Defense

138. Public Resource's counterclaim is barred in whole or in part for failure to state a claim for which relief may be granted.

Second Affirmative Defense

139. Public Resource's counterclaim is unnecessary in light of Defendant's denial of liability for Plaintiffs' claim.

Third Affirmative Defense

140. Public Resource's counterclaim is redundant of Defendant's affirmative defenses to Plaintiffs' claim.

Fourth Affirmative Defense

141. The "unclean hands doctrine" derives from the equitable maxim that "he who comes into equity must come with clean hands."

142. The unclean hands doctrine "closes the doors of a court of equity to one tainted with inequity or bad faith relative to the matter in which he seeks relief."

143. The unclean hands doctrine requires that "one seeking relief must have acted fairly and without fraud or deceit as to the controversy at issue."

144. "Any willful act concerning the cause of action which rightfully can be said to

transgress equitable standards of conduct is sufficient cause for invocation of the [unclean hands] maxim ...”

145. Public Resource willfully published the 1999 Standards to Public Resource’s <https://law.resource.org> website, without legal justification or permission from Plaintiffs to do so.

146. Public Resource’s willful, bad faith infringement and contributory infringement of Plaintiffs’ work, the 1999 Standards, transgressed equitable standards of conduct. Public Resource further acted unfairly and with fraud and deceit as to the controversy presently before the Court.

147. Public Resource’s counterclaim for declaratory relief is therefore barred by the doctrine of unclean hands.

Fifth Affirmative Defense

148. Public Resource’s counterclaim is inapplicable, in view of Defendant’s admission of infringement (*see* ¶ 127 of Defendant’s counterclaim).

Sixth Affirmative Defense

149. The relief requested in Public Resource’s counterclaim is contrary to the public policy of affording adequate and appropriate protection to works that are subject to copyright.

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Seventh Affirmative Defense

150. Public Resource's counterclaim is not the proper subject of a trial before a jury.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, LLP

Dated: August 21, 2014

By:

/s/ Jonathan Hudis

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AMERICAN EDUCATIONAL RESEARCH
ASSOCIATION, INC.
AMERICAN PSYCHOLOGICAL
ASSOCIATION, INC.
NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION, INC.

{431384US; 10743116_1.DOCX}

CERTIFICATE OF SERVICE

I hereby certify that on August 21, 2014, the foregoing **PLAINTIFFS' REPLY AND AFFIRMATIVE DEFENSES TO DEFENDANT'S COUNTERCLAIM FOR DECLARATORY RELIEF** was filed using the CM/ECF system that sent notice of the filing of these documents to all counsel of record, and was also served via e-mail to:

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Counsel for Defendant
PUBLIC.RESOURCE.ORG, INC.

/s/ Jonathan Hudis

Jonathan Hudis

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN EDUCATIONAL RESEARCH)	
ASSOCIATION, INC., AMERICAN)	
PSYCHOLOGICAL ASSOCIATION, INC.,)	
and NATIONAL COUNCIL ON)	
MEASUREMENT IN EDUCATION, INC.,	)	Civil Action No. 1:14-cv-00857-TSC-DAR
)	
Plaintiffs,	)	MEMORANDUM OF POINTS
	)	AND AUTHORITIES IN SUPPORT
v.	)	OF PLAINTIFFS' MOTION FOR
)	SUMMARY JUDGMENT AND
PUBLIC.RESOURCE.ORG, INC.,)	ENTRY OF A PERMANENT
)	INJUNCTION
Defendant.)	
)	

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AMERICAN EDUCATIONAL RESEARCH
ASSOCIATION, INC.
AMERICAN PSYCHOLOGICAL
ASSOCIATION, INC.
NATIONAL COUNCIL ON
MEASUREMENT IN EDUCATION, INC.

PRELIMINARY STATEMENT

Plaintiffs, the American Educational Research Association, Inc. (“AERA”), the American Psychological Association, Inc. (“APA”), and the National Council on Measurement in Education, Inc. (“NCME”) (collectively, “Plaintiffs” or the “Sponsoring Organizations”), submit this Memorandum of Points and Authorities in support of Plaintiffs’ Motion for Summary Judgment and the entry of a Permanent Injunction.

The Sponsoring Organizations’ work, the “Standards for Educational and Psychological Testing (1999 ed.)” (the “1999 Standards”) were written at great expense, including many years of volunteer effort given by a select group of the leading minds in educational and psychological testing of their time. Until recently updated by the 2014 edition, for fifteen years the 1999 Standards were considered the foremost authority of best practices in the preparation and administration of tests; particularly in the areas of validity, reliability, and fairness. The 1999 Standards continue to have enduring value for those in the testing profession who (i) need to know the state of best testing practices as they existed between 1999 and 2014, (ii) believe they still may be held accountable to the guidance of the 1999 Standards even now, and/or (iii) study the changes in best testing practices over time.

Defendant, Public.Resource.Org, Inc. (“Public Resource”), by assertion of a “species of mutant copyright law,”¹ has made itself judge, jury, and executioner of the Sponsoring Organizations’ rights in the 1999 Standards – merely due to the happenstance that the Standards were cited in federal and state regulations. Without the Sponsoring Organizations’ permission, Public Resource created a PDF (Acrobat Reader) version of the 1999 Standards and posted the PDF file to two unrestricted Internet websites. Moreover, Public Resource posted the 1999

¹ *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23, 34 (2003) (castigating the plaintiffs for asserting a claim of reverse passing off under Trademark Act Section 43(a), 15 U.S.C. § 1125(a) that “would create a species of mutant copyright law that limits the public’s ‘federal right to ‘copy and to use’ expired copyrights”).

per copy. From 2000 to 2014, except for the near two-year period during which Public Resource posted unauthorized copies online and sales diminished significantly, income generated from sales of the 1999 Standards, on average, had been approximately in excess of \$127,000 per year (Levine Decl., ¶¶ 17-18 Exh. OOO).

After the 2014 Standards were published in the late summer of 2014, AERA for a time discontinued sales of the 1999 Standards. This was to encourage sales of the newly-revised edition – the 2014 Standards (Levine Decl., ¶ 19, Exh. PPP). However, so long as purchasers are made aware that it is no longer the current edition, the 1999 Standards do have an enduring value for those in the testing and assessment profession who (i) need to know the state of best testing practices as they existed between 1999 and 2014, (ii) believe they still may be held accountable to the guidance of the 1999 Standards even now, and/or (iii) study the changes in best testing and assessment practices over time. For these reasons, in the summer of 2015 AERA resumed sales of the 1999 Standards (Levine Decl., ¶ 20, Exh. QQQ).

The Sponsoring Organizations do not keep any of the proceeds generated from the sales of the Standards. Rather, the income from these sales is used by the Sponsoring Organizations to offset their development and production costs and to generate funds for subsequent revisions. This allows the Sponsoring Organizations to develop up-to-date, high quality Standards that otherwise would not be developed due to the time and effort that goes into producing them (Levine Decl., ¶ 21; Geisinger Decl., ¶ 22; Camara Decl., ¶ 19; Ernesto Decl., ¶ 31). Without receiving at least some moderate income from the sales of the Standards to offset their production costs and to allow for further revisions, it is very likely that the Sponsoring Organizations would no longer undertake to periodically update them, and it is unknown who else would (Levine Decl., ¶ 22; Ernesto Decl., ¶ 32; Wise Decl., ¶ 24; Geisinger Decl., ¶ 22).

At one time, funding for the Standards revision process from third party sources (*e.g.*, governmental agencies, foundations, other associations interested in testing and assessment issues, etc.) was considered. However, this option was not seriously considered as the difficulty and/or potential conflicts of interest in doing so left the Sponsoring Organizations to conclude that financial support for the Standards revisions should be self-funding – that is, from the sale of prior editions of the Standards (Levine Decl., ¶ 23; Camara Decl., ¶ 20).

Due to the small membership size of Plaintiff NCME, and the relative minor portion of the membership of Plaintiffs AERA and APA who devote their careers to testing and assessment, it is highly unlikely that the members of the Sponsoring Organizations will vote for a dues increase to fund future Standards revision efforts if Public Resource successfully defends this case and is allowed to post the Standards online for the public to download or print for free. As a result, the Sponsoring Organizations would likely abandon their practice of periodically updating the Standards (Levine Decl., ¶ 24; Camara Decl., ¶ 24; Geisinger Decl., ¶ 23; Ernesto Decl., ¶ 33).

Plaintiffs' Ownership of the Copyright in the Standards

The Plaintiffs are joint owners of the copyright in and to the Standards. The Standards were registered with the U.S. Register of Copyrights under Registration Number TX 5-100-196, having an effective date of December 8, 1999 (Levine Decl., ¶ 25, Exh. RRR). A supplementary copyright registration for the Standards was issued by the U.S. Register of Copyrights under Supplementary Registration Number TX 6-434-609, having an effective date of February 25, 2014 (Levine Decl., ¶ 26, Exh. SSS).

The Joint Committee that authored the 1999 Standards comprised 16 members (Levine Decl., ¶¶ 27-28, Exh. TTT). Except for Manfred Meier (who could not be located, nor could his

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

AMERICAN EDUCATIONAL RESEARCH)	
ASSOCIATION, INC., AMERICAN)	
PSYCHOLOGICAL ASSOCIATION, INC.,)	
and NATIONAL COUNCIL ON)	
MEASUREMENT IN EDUCATION, INC.,	)	Civil Action No. 1:14-cv-00857-TSC-DAR
)	
Plaintiffs,	)	PLAINTIFFS' STATEMENT OF
	)	MATERIAL FACTS IN SUPPORT
v.	)	OF THEIR MOTION FOR
	)	SUMMARY JUDGMENT
PUBLIC.RESOURCE.ORG, INC.,)	
)	
Defendant.)	
)	

Pursuant to the Local Rule 7(h), Plaintiffs, American Educational Research Association, Inc. (“AERA”), American Psychological Association, Inc. (“APA”) and National Council on Measurement in Education, Inc. (“NCME”) (collectively, “Plaintiffs” or the “Sponsoring Organizations”) submit, in support of their Motion for Summary Judgment, a Statement of Material Facts as to which there are no genuine issues that otherwise would be left for trial:

I. Plaintiffs

1. Plaintiffs, AERA, APA, and NCME, are District of Columbia not-for-profit corporations (Levine Decl., ¶ 4; Ernesto Decl., ¶ 3; Wise Decl., ¶ 3).

2. AERA is the major national scientific society for research on education and learning. AERA's mission is to advance knowledge about education, to encourage scholarly inquiry related to education, and to promote the use of research to improve education and serve the public good (Levine Decl., ¶ 5).

3. APA is the largest scientific and professional organization representing psychology in the United States. APA is the world's largest association of psychologists and counts a vast number of researchers, educators, clinicians, consultants and students among its

generated from sales of the 1999 Standards, on average, had been approximately in excess of \$127,000 per year (Levine Decl., ¶¶ 17-18 Exh. OOO).

35. After the 2014 Standards were published in the late summer of 2014, AERA for a time discontinued sales of the 1999 Standards. This was to encourage sales of the newly-revised edition – the 2014 Standards (Levine Decl., ¶ 19, Exh. PPP). However, so long as purchasers are made aware that it is no longer the current edition, the 1999 Standards do have an enduring value for those in the testing and assessment profession who (i) need to know the state of best testing practices as they existed between 1999 and 2014, (ii) believe they still may be held accountable to the guidance of the 1999 Standards even now, and/or (iii) study the changes in best testing and assessment practices over time. For these reasons, in the summer of 2015 AERA resumed sales of the 1999 Standards (Levine Decl., ¶ 20, Exh. QQQ).

36. The Sponsoring Organizations do not keep any of the proceeds generated from the sales of the Standards. Rather, the income from these sales is used by the Sponsoring Organizations to offset their development and production costs and to generate funds for subsequent revisions. This allows the Sponsoring Organizations to develop up-to-date, high quality Standards that otherwise would not be developed due to the time and effort that goes into producing them (Levine Decl., ¶ 21; Geisinger Decl., ¶ 22; Camara Decl., ¶ 19; Ernesto Decl., ¶ 31).

37. Without receiving at least some moderate income from the sales of the Standards to offset their production costs and to allow for further revisions, it is very likely that the Sponsoring Organizations would no longer undertake to periodically update them, and it is unknown who else would (Levine Decl., ¶ 22; Ernesto Decl., ¶ 32; Wise Decl., ¶ 24; Geisinger Decl., ¶ 22).

EXHIBIT T

Case No. 1:14-cv-00857-TSC-DAR

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

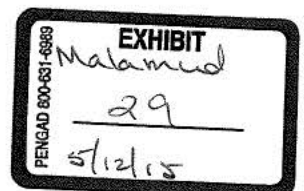
AMERICAN EDUCATIONAL RESEARCH)	
ASSOCIATION, INC., AMERICAN	)	Civil Action No. 1:14-cv-00857-TSC-DAR
PSYCHOLOGICAL ASSOCIATION, INC.,)	
and NATIONAL COUNCIL ON)	
MEASUREMENT IN EDUCATION, INC.,	)	DEFENDANT-COUNTERCLAIMANT
	)	PUBLIC.RESOURCE.ORG, INC.'S
Plaintiffs/Counterdefendants,	)	AMENDED RESPONSES TO
	)	PLAINTIFFS-
v.	)	COUNTERDEFENDANTS' FIRST SET
	)	OF INTERROGATORIES (NOS 1-8)
PUBLIC.RESOURCE.ORG, INC.,)	
)	
Defendant/Counterclaimant.)	

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure and the Local Civil Rules of Civil Procedure of this Court, Defendant Public.Resource.Org, Inc. ("Public Resource") hereby responds to Plaintiffs' American Educational Research Association, Inc., American Psychological Association, Inc., and National Council on Measurement in Education, Inc., First Set of Interrogatories.

GENERAL OBJECTIONS

1. Public Resource objects to the interrogatories to the extent that they are overly broad, unduly burdensome, or oppressive, or to the extent they are inconsistent with, or purport to impose obligations on Public Resource beyond those set forth by the Federal Rules of Civil Procedure, the Local Rules of the United States District Court for the District of Columbia, the Federal Rules of Evidence, or any applicable regulations and case law, particularly to the extent that compliance would force Public Resource to incur a substantial expense that outweighs any likely benefit of the discovery. Public Resource's responses, regardless of whether they include a specific objection, do not constitute an adoption or acceptance of the definitions and instructions that Plaintiffs seek to impose.

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2. Public Resource objects to the interrogatories to the extent that they seek documents and information that are neither relevant to the Action nor reasonably calculated to lead to the discovery of admissible evidence. Public Resource objects to the interrogatories to the extent that they seek documents and information that are not in Public Resource's possession, custody or control. Public Resource objects to the interrogatories on the ground that they seek to impose obligations on Public Resource that are unduly burdensome, especially to the extent that requested information is publicly available or burdensome to search for or obtain. Public Resource further objects to the extent that the interrogatories are overbroad and that their number exceeds the number that the Federal Rules of Civil Procedure authorize.

3. Public Resource objects to the interrogatories to the extent that they seek information that falls under the attorney-client privilege, work-product doctrine, common interest privilege, or other applicable privileges or protections. Public Resource will not provide such information, and any inadvertent production is not a waiver of any applicable privilege or protection.

4. Public Resource objects to the interrogatories, and each and every instruction and definition, to the extent that Plaintiffs seek information that is not limited to a relevant and reasonable period of time.

5. Public Resource objects to the interrogatories to the extent they are argumentative.

6. Public Resource objects to the interrogatories to the extent they are cumulative and/or duplicative of any other of Plaintiffs' discovery requests.

7. Public Resource objects to the definition of "Public Resource" on the grounds that it is vague, ambiguous, overbroad, and unduly burdensome, particularly to the extent that it purports to include any affiliates or other persons when such persons are acting outside of a capacity of representing Public Resource.

8. Public Resource objects to the term "Public Resource Website" on the grounds that it is vague, ambiguous, overbroad, and unduly burdensome, particularly to the extent it fails

to identify which websites Plaintiffs consider “owned, controlled or operated” by Public Resource, other than law.resource.org, public.resource.org, house.resource.org, and bulk.resource.org.

9. Public Resource objects to the definition of “communication” to the extent it includes information protected by the attorney-client privilege, the attorney work product doctrine, or any other applicable privilege or protection as provided by law. Public Resource further objects to the definitions of this term as seeking to impose obligations broader than, or inconsistent with, the Federal Rules, the Local Rules, and/or the law of this Circuit. Public Resource will respond to the interrogatories using the ordinary meaning of “communications” and the scope of this term given by Fed. R. Civ. P. 33 and 34.

10. Public Resource objects to the definition of “identify” to the extent it seeks to impose obligations broader than, or inconsistent with, the Federal Rules, the Local Rules, and/or the law of this Circuit. Public Resource will respond to the interrogatories using the ordinary meaning of “identify” and the scope of this term given by Fed. R. Civ. P. 33.

11. Public Resource objects to the extent the requests are premature. It reserves the right to amend or supplement its responses as the Action proceeds.

12. Public Resource’s responses to these interrogatories are made without waiving, or intending to waive, but on the contrary, preserving and intending to preserve: (a) the right to object, on the grounds of competency, privilege, relevance or materiality, or any other proper grounds, to the use of any documents or other information for any purpose in whole or in part, in any subsequent proceeding in this action or in any other action; (b) the right to object on any and all grounds, at any time, to other requests for production, interrogatories, or other discovery procedures involving or relating to the subject matter of the interrogatory to which Defendants have responded here; and (c) the right at any time to revise, correct, add to, or clarify any of the responses made here.

RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 1:

Identify and describe how Public Resource obtained any printed version or versions of the 1999 Standards.

RESPONSE TO INTERROGATORY NO. 1:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law.

Subject to and without waiving the foregoing objections, Public Resource responds as follows:

Public Resource purchased a printed copy from “thebookgrove,” a used book seller, on May 17, 2012. Pursuant to Federal Rule of Civil Procedure 33(d), Public Resource will produce the invoice or invoices for such orders that are in its custody, possession, or control. Public Resource believes that to the extent details such as dates, payment amounts, and product names are available, they may be derived from this invoice or invoices.

INTERROGATORY NO. 2:

Identify when the 1999 Standards were first and last posted or published to a Public Resource Website, and identify the particular Public Resource Website(s) to which the 1999 Standards were posted or published.

RESPONSE TO INTERROGATORY NO. 2:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this request to the extent that it seeks information that is equally available to Plaintiffs

from other sources that are more convenient, less burdensome and/or less expensive, particularly to the extent the information sought is publicly available.

Subject to and without waiving the foregoing objections, Public Resource responds as follows:

The 1999 Standard was first posted to the law.resource.org website on July 11, 2012. On that date, the 1999 Standard was also posted by Public Resource on the Public Safety collection on the Internet Archive.

The 1999 Standard was last posted to a Public Resource Website on June 10, 2014. The 1999 Standard was also removed from public view on the Internet Archive on that date.

INTERROGATORY NO. 3:

Identify and describe the process Public Resource used to digitize or convert to digital format the 1999 Standards from paper format, including any quality control measures Public Resource used to prevent the content of the 1999 Standards from being altered.

RESPONSE TO INTERROGATORY NO. 3:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “digitize” as vague and ambiguous.

Subject to and without waiving the foregoing objections, Public Resource responds as follows:

Public Resource procures standards, including the 1999 Standard, as paper documents. It then disassembles them, removing any spines, stuffing, staples, or other extraneous materials. If necessary, it trims the documents to give them an even border. It then scans the documents on a Xerox 4250 scanner at 300 or 400 dots per inch. It names each file in a standard manner, including the standard setting organization, the standard number, and the date. For example, one name is “aera.standards.1999.pdf.”

Public Resource appends a cover sheet to each file consisting of the name of the standard setting organization, the date, the title, and (most importantly) the specific section of law that incorporates this specific standard into law. This is an important part of the quality check process. If Public Resource is unable to find a specific incorporation, it does nothing further with the standard and does not post it.

The scanning process produces files in PDF format. The files are post-processed to optimize the scans and to generate Optical Character Recognition (OCR) on the text. Public Resource then double-checks the IBR reference(s), puts a cover sheet on the files, and stamps metadata into the headers. Public Resource then posts these files on its website as well as the Internet Archive using the HTTPS (secure HTTP) protocol. Public Resource also makes the files available using FTP and Rsync.

INTERROGATORY NO. 4:

Identify all persons who and companies that participated on Public Resource's behalf (including Public Resource itself) in digitizing or converting a paper version of the 1999 Standards to digital format, and describe the nature of each person's and/or company's participation.

RESPONSE TO INTERROGATORY NO. 4:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory as outside the scope of discovery to the extent it calls for information that is not within Public Resource's knowledge. Public Resource objects to this interrogatory as overly broad and unduly burdensome to the extent it seeks information about entities other than Public Resource. Public Resource objects to this interrogatory to the extent it calls for the disclosure of information that is protected by any individual's right of privacy.

Subject to and without waiving the foregoing objections, Public Resource responds as follows:

Public Resource incorporates by reference its response to Interrogatory No. 3.

Contact information for each entity is as follows:

Carl Malamud

Public.Resource.Org

1005 Gravenstein Hwy N

Sebastopol, CA 95472

INTERROGATORY NO. 5:

Identify and describe, by month and year starting from the date that the 1999 Standards were first posted on or published to a Public Resource Website or Public Resource Websites, the number of visitors who viewed and/or accessed the 1999 Standards on that website or those websites.

RESPONSE TO INTERROGATORY NO. 5:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “viewed and/or accessed” as vague and ambiguous. Public Resource objects to this interrogatory as seeking information not relevant to any party’s claims or defenses and not reasonably calculated to lead to the discovery of admissible evidence to the extent that the term “accessed” means “viewed.” Public Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

Subject to and without waiving the foregoing objections, to the extent the information sought is available, Public Resource will produce and identify non-privileged documents that exist within its possession, custody, and control from which the response to this interrogatory may be derived.

AMENDED RESPONSE TO INTERROGATORY NO. 6:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “viewed and/or accessed” as vague and ambiguous. Public Resource objects to this interrogatory as seeking information not relevant to any party’s claims or defenses and not reasonably calculated to lead to the discovery of admissible evidence to the extent that the term “accessed” means “viewed.” Public Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

After conference, the parties agree as follows:

- “Accessed” means to digitally retrieve or open an electronic file or data.
- “View(ed)” means the act of seeing or examining.
- “Downloaded” means a user reproducing an electronic file by saving a reproduction of the file to a location on the user’s device with the intent to facilitate permanent ready access until the user deletes the file. This definition of “download” includes use of functions such as “Save” and “Save As,” but does not include printing physical hardcopies, taking screenshots, or cache reproductions such as “Temporary Internet files.”

Based on the parties’ agreement on the definitions of “viewed” and “accessed,” Public Resource responds as follows:

Public Resource recorded on the Public.Resource.org website the following number of HyperText Transfer Protocol (HTTP) requests for the filename “aera.standards.1999.pdf” for

each month and date below. In calculating the number of HTTP requests, Public Resource counted each successful full retrieval request (“status code 200”) as one request and all partial retrieval requests (“status code 206”) within the same hour as one request (under the assumption that each set was one device making a series of partial retrieval requests that added up to one full retrieval).

2013-08:	18
2013-09:	58
2013-10:	259
2013-11:	260
2013-12:	331
2014-01:	564
2014-02:	471
2014-03:	536
2014-04:	633
2014-05:	741
2014-06:	293
2014-07:	69
2014-08:	48
2014-09:	30
2014-10:	50

Public Resource recorded on the Public.Resource.org website the following number of File Transfer Protocol (FTP) requests for the filename “aera.standards.1999.pdf” for each month and date below.

2013-06:	1
2013-07:	2
2013-08:	1
2013-09:	3
2013-10:	3
2013-11:	4
2013-12:	8
2014-03:	6
2014-04:	5
2014-05:	4
2014-06:	1
2014-08:	1
2014-09:	2
2014-10:	1

Public Resource recorded on the Public.Resource.org website the following number of Rsync (remote sync) protocol requests for the filename “aera.standards.1999.pdf” for each month and date below.

2013-04:	1
2013-11:	1

On June 10, 2014, at Plaintiffs’ request, Public Resource replaced on its website the document which had the filename “aera.standards.1999.pdf” with a stub document explaining this litigation. Because the stub document has the same filename, retrievals of that document also appear in this set of records.

INTERROGATORY NO. 6:

Identify the number of times the 1999 Standards were downloaded from a Public Resource Website or Public Resources Websites, and identify the particular Public Resource Website(s) from which the 1999 Standards were downloaded.

RESPONSE TO INTERROGATORY NO. 7:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “downloaded” as vague and ambiguous. Public Resource objects to this interrogatory as seeking information not relevant to any party’s claims or defenses and not reasonably calculated to lead to the discovery of admissible evidence to the extent that the term “downloaded” means “viewed.” Public Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

Subject to and without waiving the foregoing objections, to the extent the information sought is available, Public Resource will produce and identify non-privileged documents that

exist within its possession, custody, and control from which the response to this interrogatory may be derived.

AMENDED RESPONSE TO INTERROGATORY NO. 8:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “downloaded” as vague and ambiguous. Public Resource objects to this interrogatory as seeking information not relevant to any party’s claims or defenses and not reasonably calculated to lead to the discovery of admissible evidence to the extent that the term “downloaded” means “viewed.” Public Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

After conference, the parties agree as follows:

- “Accessed” means to digitally retrieve or open an electronic file or data.
- “View(ed)” means the act of seeing or examining.
- “Downloaded” means a user reproducing an electronic file by saving a reproduction of the file to a location on the user’s device with the intent to facilitate permanent ready access until the user deletes the file. This definition of “download” includes use of functions such as “Save” and “Save As,” but does not include printing physical hardcopies, taking screenshots, or cache reproductions such as “Temporary Internet files.”

Based on the parties’ agreement on the definitions of “accessed,” “viewed” and “downloaded,” Public Resource responds as follows:

Subject to and without waiving the foregoing objections, to the best of its knowledge at this time, Public Resource has no information responsive to this request specific to the act of downloading (as opposed to the act of accessing, which Public Resource addresses in its response to Interrogatory No. 5). Public Resource’s investigation is ongoing, and to the extent it

locates any non-privileged documents from which responsive information may be derived, it will produce them pursuant to Federal Rule of Civil Procedure 33(d).

INTERROGATORY NO. 7:

Identify and describe all instances of which you are aware in which a third party, after downloading the 1999 Standards from a Public Resource Website, posted the 1999 Standards online to a website other than a Public Resource Website, made further reproductions of the 1999 Standards, or created derivative works based on the 1999 Standards.

RESPONSE TO INTERROGATORY NO. 9:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “downloading” as vague and ambiguous. Public Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

Subject to and without waiving the foregoing objections, Public Resource responds that it is not aware of any information responsive to this interrogatory. Public Resource’s investigation is ongoing, and to the extent it locates any non-privileged documents from which responsive information may be derived, it will produce them pursuant to Federal Rule of Civil Procedure 33(d).

AMENDED RESPONSE TO INTERROGATORY NO. 10:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory and to the term “downloading” as vague and ambiguous. Public

Resource objects to this interrogatory to the extent that the scope of the information sought is not limited to a relevant and reasonable period of time.

After conference, the parties agree as follows:

- “Accessed” means to digitally retrieve or open an electronic file or data.
- “View(ed)” means the act of seeing or examining.
- “Downloaded” means a user reproducing an electronic file by saving a reproduction of the file to a location on the user’s device with the intent to facilitate permanent ready access until the user deletes the file. This definition of “download” includes use of functions such as “Save” and “Save As,” but does not include printing physical hardcopies, taking screenshots, or cache reproductions such as “Temporary Internet files.”

Based on the parties’ agreement on the definitions of “accessed,” “viewed” and “downloaded,” Public Resource responds as follows:

Subject to and without waiving the foregoing objections, Public Resource responds that it is not aware of any information responsive to this interrogatory. Public Resource’s investigation is ongoing, and to the extent it locates any non-privileged documents from which responsive information may be derived, it will produce them pursuant to Federal Rule of Civil Procedure 33(d).

INTERROGATORY NO. 8:

State the factual and legal basis of each Affirmative and Other Defense to Plaintiffs’ Complaint, as asserted in Public Resource’s Counterclaim and Answer filed with the Court on July 14, 2014.

RESPONSE TO INTERROGATORY NO. 11:

Public Resource incorporates its general objections as if fully set forth here. Public Resource objects to this interrogatory to the extent it purports to impose upon Public Resource obligations broader than, or inconsistent with, the Federal Rules of Civil Procedure, local rules, Court Orders for this proceeding, or any applicable regulations and case law. Public Resource objects to this interrogatory to the extent it seeks disclosure of information that falls under the

work product doctrine. Public Resource objects to this interrogatory because it is argumentative. Public Resource objects to this interrogatory because it seeks information that is publicly available, already known, or equally available to Plaintiffs. Public Resource objects to this interrogatory as it seeks “factual and legal basis” at an early stage of the litigation.

Date: December 15, 2014

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Attorneys for Defendant-Counterclaimant
PUBLIC.RESOURCE.ORG, INC.

VERIFICATION

I, Carl Malamud, declare:

I am President of Public.Resource.Org, a nonprofit corporation organized and existing under the laws of California, which is the defendant in the above-entitled action, and I have been authorized to make this verification on its behalf.

I have read the foregoing DEFENDANT-COUNTERCLAIMANT PUBLIC.RESOURCE.ORG, INC.'S AMENDED RESPONSES TO PLAINTIFF-COUNTERDEFENDANTS' FIRST SET OF INTERROGATORIES and know its contents. They are true, except as to those matters identified as on information and belief, and, as to those matters, I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

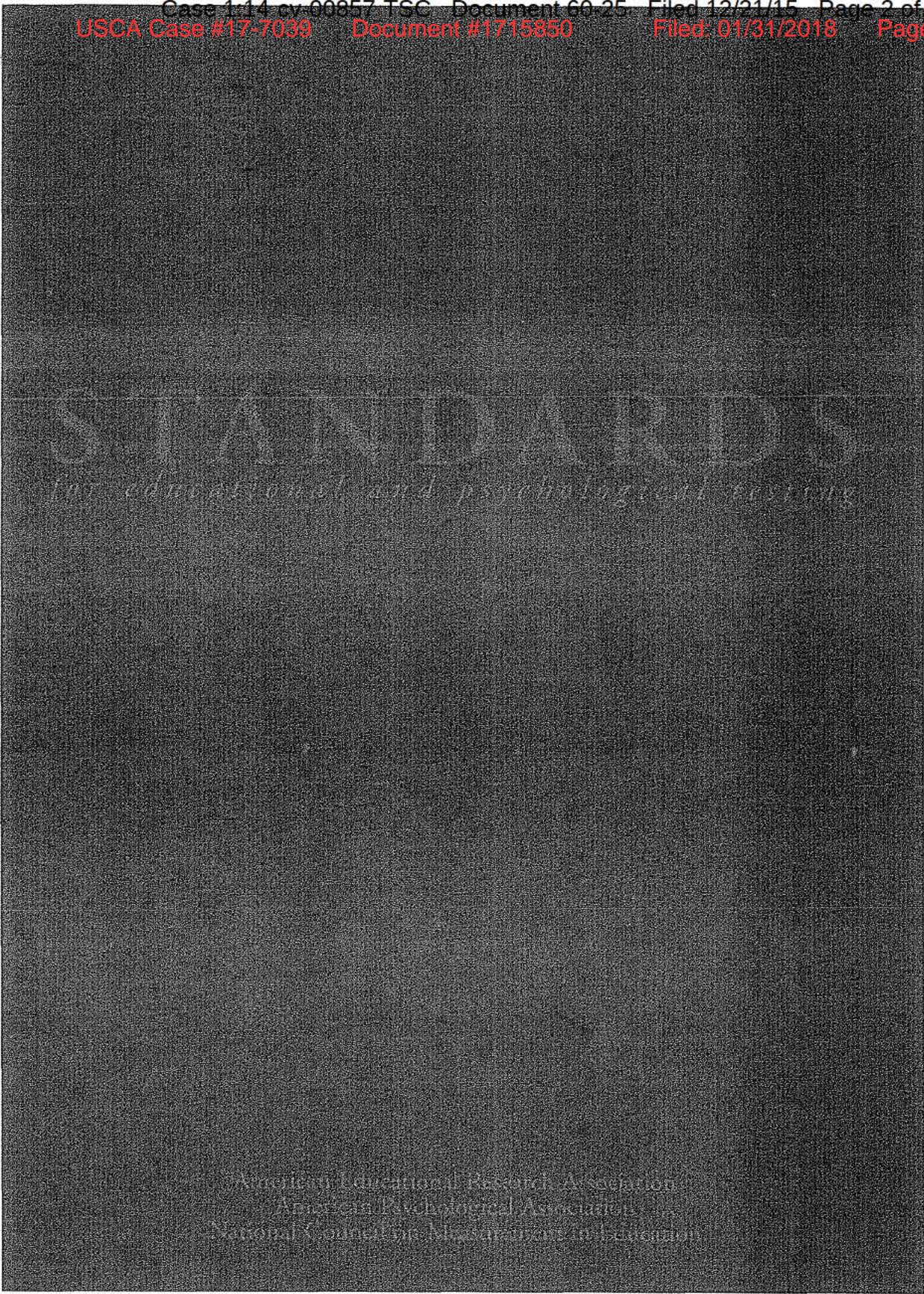
Executed this 15th day of December, 2014.

A handwritten signature in black ink, appearing to read 'Carl Malamud', is written over a horizontal line.

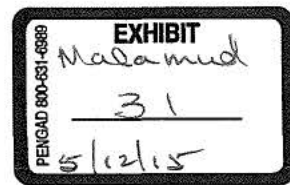
Carl Malamud

EXHIBIT V-1

Case No. 1:14-cv-00857-TSC-DAR



American Educational Research Association
American Psychological Association
National Council on Measurement and Education



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Standards for Educational and Psychological Testing AERA, APA, NCME

STANDARDS

for educational and psychological testing

American Educational Research Association
American Psychological Association
National Council on Measurement in Education

USCA Case #17-7039

Document #1715850

Filed: 01/31/2018

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fourth, 2007; fifth, 2008; and sixth, 2011.

The *Standards for Educational and Psychological Testing* will be under continuing review by the three sponsoring organizations. Comments and suggestions will be welcome and should be sent to The Committee to Develop Standards for Educational and Psychological Testing in care of the Executive Office, American Psychological Association, 750 First Street, NE, Washington, DC 20002-4242.

Prepared by the
Joint Committee on Standards for Educational and Psychological Testing of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education.

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PREFACE

There have been five earlier documents from three sponsoring organizations guiding the development and use of tests. The first of these was *Technical Recommendations for Psychological Tests and Diagnostic Techniques*, prepared by a committee of the American Psychological Association (APA) and published by that organization in 1954. The second was *Technical Recommendations for Achievement Tests*, prepared by a committee representing the American Educational Research Association (AERA) and the National Council on Measurement Used in Education (NCMUE) and published by the National Education Association in 1955. The third, which replaced the earlier two, was published by APA in 1966 and prepared by a committee representing APA, AERA, and the National Council on Measurement in Education (NCME) and called the *Standards for Educational and Psychological Tests and Manuals*. The fourth, *Standards for Educational and Psychological Tests*, was again a collaboration of AERA, APA and NCME, and was published in 1974. The fifth, *Standards for Educational and Psychological Testing*, also a joint collaboration, was published in 1985.

In 1991 APA's Committee on Psychological Tests and Assessment suggested the need to revise the 1985 *Standards*. Representatives of AERA, APA and NCME met and discussed the revision, principles that should guide that revision, and potential Joint Committee members. By 1993, the presidents of the three organizations appointed members and the Committee had its first meeting November, 1993.

The *Standards* has been developed by a joint committee appointed by AERA, APA and NCME. Members of the Committee were:

Eva Baker, *co-chair*
Paul Sackett, *co-chair*
Lloyd Bond
Leonard Feldt

David Goh
Bert Green
Edward Haertel
Jo-Ida Hansen
Sharon Johnson-Lewis
Suzanne Lane
Joseph Matarazzo
Manfred Meier
Pamela Moss
Esteban Olmedo
Diana Pullin

From 1993 to 1996 Charles Spielberger served on the Committee as co-chair. Each sponsoring organization was permitted to assign up to two liaisons to the Joint Committee's project. Liaisons served as the conduits between the sponsoring organizations and the Joint Committee. APA's liaison from its Committee on Psychological Tests and Assessments changed several times as the membership of the Committee changed.

Liaisons to the Joint Committee:

AERA - William Mehrens
APA - Bruce Bracken, Andrew Czopek,
Rodney Lowman, Thomas Oakland
NCME - Daniel Eignor

APA and NCME also had committees who served to monitor the process and keep relevant parties informed.

APA Ad Hoc Committee of the Council of Representatives:

Melba Vasquez
Donald Bersoff
Stephen DeMers
James Farr
Bertram Karon
Nadine Lambert
Charles Spielberger

NCME Standards and Test Use Committee:

Gregory Cizek
Allen Doolittle
Le Ann Gamache

PREFACE

Donald Ross Green
Ellen Julian
Tracy Muenz
Nambury Raju

A management committee was formed at the beginning of this effort. They monitored the financial and administrative arrangements of the project, and advised the sponsoring organizations on such matters.

Management Committee:

Frank Farley, APA
George Madaus, AERA
Wendy Yen, NCME

Staffing for the revision included Dianne Brown Maranto as project director, and Dianne L. Schneider as staff liaison. Wayne J. Camara served as project director from 1993 to 1994. APA's legal counsel conducted the legal review of the *Standards*. William C. Howell and William Mehrens reviewed the standards for consistency across chapters. Linda Murphy developed the indexing for the book.

The Joint Committee solicited preliminary reviews of some draft chapters, from recognized experts. These reviews were primarily solicited for the technical and fairness chapters. Reviewers are listed below:

Marvin Alkin
Philip Bashook
Bruce Bloxom
Jeffery P. Braden
Robert L. Brennan
John Callender
Ronald Cannella
Lee J. Cronbach
James Cummins
John Fremer
Kurt F. Geisinger
Robert M. Guion
Walter Haney
Patti L. Harrison
Gerald P. Koocher
Richard Jeanneret

Frank Landy
Ellen Lent
Robert Linn
Theresa C. Liu
Stanford von Mayrhauser
Milbrey W. McLaughlin
Samuel Messick
Craig N. Mills
Robert J. Mislevy
Kevin R. Murphy
Mary Anne Nester
Maria Pennock-Roman
Carole Perlman
Michael Rosenfeld
Jonathan Sandoval
Cynthia B. Schmeiser
Kara Schmitt
Neal Schmitt
Richard J. Shavelson
Lorrie A. Shepard
Mark E. Swerdlik
Janet Wall
Anthony R. Zara

Draft versions of the *Standards* were widely distributed for public review and comment three times during this revision effort, providing the Committee with a total of nearly 8,000 pages of comments. Organizations who submitted comments on drafts are listed below. Many individuals contributed to the input from each organization, and although we wish we could acknowledge every individual who had input, we cannot do so due to incomplete information as to who contributed to each organization's response. The Joint Committee could not have completed its task without the thoughtful reviews of so many professionals.

Sponsoring Associations

American Educational Research
Association (AERA)
American Psychological Association (APA)
National Council on Measurement in
Education (NCME)

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Membership Organizations (Scientific, Professional, Trade & Advocacy)

American Association for Higher Education (AAHE)
 American Board of Medical Specialties (ABMS)
 American Counseling Association (ACA)
 American Evaluation Association (AEA)
 American Occupational Therapy Association
 American Psychological Society (APS)
 APA Division of Counseling Psychology (Division 17)
 APA Division of Developmental Psychology (Division 7)
 APA Division of Evaluation, Measurement, and Statistics (Division 5)
 APA Division of Mental Retardation & Developmental Disabilities (Division 33)
 APA Division of Pharmacology & Substance Abuse (Division 28)
 APA Division of Rehabilitation Psychology (Division 22)
 APA Division of School Psychology (Division 16)
 Asian American Psychological Association (AAPA)
 Association for Assessment in Counseling (AAC)
 Association of Test Publishers (ATP)
 Australian Council for Educational Research Limited (ACER)
 Chicago Industrial/Organizational Psychologists (CIOP)
 Council on Licensure, Enforcement, and Regulation (CLEAR), Examination Resources & Advisory Committee (ERAC)
 Equal Employment Advisory Council (EEAC)
 Foundation for Rehabilitation Certification, Education and Research
 Human Sciences Research Council, South Africa
 International Association for Cross-Cultural Psychology (IACCP)

International Brotherhood of Electrical Workers
 International Language Testing Association
 International Personnel Management Association Assessment Council (IPMAAC)
 Joint Committee on Testing Practices (JCTP)
 National Association for the Advancement of Colored People (NAACP), Legal Defense and Educational Fund, Inc.
 National Center for Fair and Open Testing (Fairtest)
 National Organization for Competency Assurance (NOCA)
 Personnel Testing Council of Metropolitan Washington (PTC/MW)
 Personnel Testing Council of Southern California (PTC/SC)
 Society for Human Resource Management (SHRM)
 Society of Indian Psychologists (SIP)
 Society for Industrial and Organizational Psychology (APA Division 14)
 Society for the Psychological Study of Ethnic Minority Issues (APA Division 45)
 State Collaborative on Assessment & Student Standards Technical Guidelines for Performance Assessment Consortium (TGPA)
 Telecommunications Staffing Forum
 Western Region Intergovernmental Personnel Assessment Council (WRIPAC)

Credentialing Boards

American Board of Physical and Medical Rehabilitation
 American Medical Technologists
 Commission on Rehabilitation Counselor Certification
 National Board for Certified Counselors (NBCC)
 National Board of Examiners in Optometry

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National Board of Medical Examiners
National Council of State Boards of
Nursing

Government and Federal Agencies

Army Research Institute (ARI)
California Highway Patrol, Personnel and
Training Division, Selection Research
Program
City of Dallas, Civil Service Department
Commonwealth of Virginia, Department
of Education
Defense Manpower Data Center
(DMDC), Personnel Testing Division
Department of Defense (DOD), Office
of the Assistant Secretary of Defense
Department of Education, Office of
Educational Improvement, National
Center for Education Statistics
Department of Justice, Immigration and
Naturalization Service (INS)
Department of Labor, Employment and
Training Administration (DOL/ETA)
U.S. Equal Employment Opportunity
Commission (EEOC)
U.S. Office of Personnel Management
(OPM), Personnel Resources &
Development Center

Test Publishers/Developers

American College Testing (ACT)
CTB/McGraw-Hill
The College Board
Educational Testing Service (ETS)
Highland Publishing Company
Institute for Personality & Ability
Testing (IPAT)
Professional Examination Service (PES)

Academic Institutions

Center for Creative Leadership
Gallaudet University, National Task
Force on Equity in Testing Deaf
Professionals
University of Haifa, Israeli Group
Kansas State University
National Center on Educational
Outcomes (NCEO)

Pennsylvania State University
University of North Carolina – Charlotte
University of Southern Mississippi,
Department of Psychology

When the Joint Committee completed its task of revising the *Standards*, it then submitted its work to the three sponsoring organizations for approval. Each organization had its own governing body and mechanism for approval, as well as definitions for what their approval means.

AERA: This endorsement carries with it the understanding that, in general, we believe the *Standards* to represent the current consensus among recognized professionals regarding expected measurement practice. Developers, sponsors, publishers, and users of tests should observe these *Standards*.

APA: The APA's approval of the *Standards* means the Council adopts the document as APA policy.

NCME: NCME endorses the *Standards for Educational and Psychological Testing* and recognizes that the intent of these *Standards* is to promote sound and responsible measurement practice. This endorsement carries with it a professional imperative for NCME members to attend to the *Standards*.

Although the *Standards* are prescriptive, the *Standards* itself does not contain enforcement mechanisms. These standards were formulated with the intent of being consistent with other standards, guidelines and codes of conduct published by the three sponsoring organizations, and listed below. The reader is encouraged to obtain these documents, some of which have references to testing and assessment in specific applications or settings.

The Joint Committee on the
*Standards for Educational and
Psychological Testing*

PREFACE

References

American Educational Research Association. (June, 1992). *Ethical Standards of the American Educational Research Association*. Washington, DC: Author.

American Federation of Teachers, National Council on Measurement in Education, & National Education Association. *Standards for Teacher Competence in Educational Assessment of Students*. (1990). Washington, DC: National Council on Measurement in Education.

American Psychological Association. (December, 1992). Ethical Principles of Psychologists and Code of Conduct. *American Psychologist*, 47 (12), 1597-1611.

Joint Committee on Testing Practices. (1988). *Code of Fair Testing Practices in Education*. Washington, DC: American Psychological Association.

National Council on Measurement in Education. (1995). *Code of Professional Responsibilities in Educational Measurement*. Washington, DC: Author.

INTRODUCTION

Educational and psychological testing and assessment are among the most important contributions of behavioral science to our society, providing fundamental and significant improvements over previous practices. Although not all tests are well-developed nor are all testing practices wise and beneficial, there is extensive evidence documenting the effectiveness of well-constructed tests for uses supported by validity evidence. The proper use of tests can result in wiser decisions about individuals and programs than would be the case without their use and also can provide a route to broader and more equitable access to education and employment. The improper use of tests, however, can cause considerable harm to test takers and other parties affected by test-based decisions. The intent of the *Standards* is to promote the sound and ethical use of tests and to provide a basis for evaluating the quality of testing practices.

Participants in the Testing Process

Educational and psychological testing and assessment involve and significantly affect individuals, institutions, and society as a whole. The individuals affected include students, parents, teachers, educational administrators, job applicants, employees, clients, patients, supervisors, executives, and evaluators, among others. The institutions affected include schools, colleges, businesses, industry, clinics, and government agencies. Individuals and institutions benefit when testing helps them achieve their goals. Society, in turn, benefits when testing contributes to the achievement of individual and institutional goals.

The interests of the various parties involved in the testing process are usually, but not always, congruent. For example, when a test is given for counseling purposes or for job placement, the interests of the individual and the institution often coincide. In contrast, when a test is used to

select from among many individuals for a highly competitive job or for entry into an educational or training program, the preferences of an applicant may be inconsistent with those of an employer or admissions officer. Similarly, when testing is mandated by a court, the interests of the test taker may be different from those of the party requesting the court order.

There are many participants in the testing process, including, among others: (a) those who prepare and develop the test; (b) those who publish and market the test; (c) those who administer and score the test; (d) those who use the test results for some decision-making purpose; (e) those who interpret test results for clients; (f) those who take the test by choice, direction, or necessity; (g) those who sponsor tests, which may be boards that represent institutions or governmental agencies that contract with a test developer for a specific instrument or service; and (h) those who select or review tests, evaluating their comparative merits or suitability for the uses proposed.

These roles are sometimes combined and sometimes further divided. For example, in clinics the test taker is typically the intended beneficiary of the test results. In some situations the test administrator is an agent of the test developer, and sometimes the test administrator is also the test user. When an industrial organization prepares its own employment tests, it is both the developer and the user. Sometimes a test is developed by a test author but published, advertised, and distributed by an independent publisher, though the publisher may play an active role in the test development. Given this intermingling of roles, it is difficult to assign precise responsibility for addressing various standards to specific participants in the testing process.

This document begins with a series of chapters on the test development process, which focus primarily on the responsibilities of test developers, and then turns to chapters

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on specific uses and applications, which focus primarily on responsibilities of test users. One chapter is devoted specifically to the rights and responsibilities of test takers.

The *Standards* is based on the premise that effective testing and assessment require that all participants in the testing process possess the knowledge, skills, and abilities relevant to their role in the testing process, as well as awareness of personal and contextual factors that may influence the testing process. They also should obtain any appropriate supervised experience and legislatively mandated practice credentials necessary to perform competently those aspects of the testing process in which they engage. For example, test developers and those selecting and interpreting tests need adequate knowledge of psychometric principles such as validity and reliability.

The Purpose of the Standards

The purpose of publishing the *Standards* is to provide criteria for the evaluation of tests, testing practices, and the effects of test use. Although the evaluation of the appropriateness of a test or testing application should depend heavily on professional judgment, the *Standards* provides a frame of reference to assure that relevant issues are addressed. It is hoped that all professional test developers, sponsors, publishers, and users will adopt the *Standards* and encourage others to do so.

The *Standards* makes no attempt to provide psychometric answers to questions of public policy regarding the use of tests. In general, the *Standards* advocates that, within feasible limits, the relevant technical information be made available so that those involved in policy debate may be fully informed.

Categories of Standards

The 1985 *Standards* designated each standard as “primary” (to be met by all tests before operational use), “secondary” (desirable, but

not feasible in certain situations), or “conditional” (importance varies with application). The present *Standards* continues the tradition of expecting test developers and users to consider all standards before operational use; however, the *Standards* does not continue the practice of designating levels of importance. Instead, the text of each standard, and any accompanying commentary, discusses the conditions under which a standard is relevant. It was not the case that under the 1985 *Standards* test developers and users were obligated to attend only to the primary standards. Rather, the term “conditional” meant that a standard was primary in some settings and secondary in others, thus requiring careful consideration of the applicability of each standard for a given setting.

The absence of designations such as “primary” or “conditional” should not be taken to imply that all standards are equally significant in any given situation. Depending on the context and purpose of test development or use, some standards will be more salient than others. Moreover, some standards are broad in scope, setting forth concerns or requirements relevant to nearly all tests or testing contexts, and other standards are narrower in scope. However, all standards are important in the contexts to which they apply. Any classification that gives the appearance of elevating the general importance of some standards over others could invite neglect of some standards that need to be addressed in particular situations.

Further, the current *Standards* does not include standards considered secondary or “desirable.” The continued use of the secondary designation would risk encouraging both the expansion of the *Standards* to encompass large numbers of “desirable” standards and the inappropriate assumption that any guideline not included in the *Standards* as at least “secondary” was inconsequential.

Unless otherwise specified in the standard or commentary, and with the caveats

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outlined below, standards should be met before operational test use. This means that each standard should be carefully considered to determine its applicability to the testing context under consideration. In a given case there may be a sound professional reason why adherence to the standard is unnecessary. It is also possible that there may be occasions when technical feasibility may influence whether a standard can be met prior to operational test use. For example, some standards may call for analyses of data that may not be available at the point of initial operational test use. If test developers, users, and, when applicable, sponsors have deemed a standard to be inapplicable or unfeasible, they should be able, if called upon, to explain the basis for their decision. However, there is no expectation that documentation be routinely available of the decisions related to each standard.

Tests and Test Uses to Which These Standards Apply

A test is an evaluative device or procedure in which a sample of an examinee's behavior in a specified domain is obtained and subsequently evaluated and scored using a standardized process. While the label *test* is ordinarily reserved for instruments on which responses are evaluated for their correctness or quality and the terms *scale* or *inventory* are used for measures of attitudes, interest, and dispositions, the *Standards* uses the single term *test* to refer to all such evaluative devices.

A distinction is sometimes made between *test* and *assessment*. *Assessment* is a broader term, commonly referring to a process that integrates test information with information from other sources (e.g., information from the individual's social, educational, employment, or psychological history). The applicability of the *Standards* to an evaluation device or method is not altered by the label applied to it (e.g., test, assessment, scale, inventory).

Tests differ on a number of dimensions: the mode in which test materials are presented (paper and pencil, oral, computerized administration, and so on); the degree to which stimulus materials are standardized; the type of response format (selection of a response from a set of alternatives as opposed to the production of a response); and the degree to which test materials are designed to reflect or simulate a particular context. In all cases, however, tests standardize the process by which test-taker responses to test materials are evaluated and scored. As noted in prior versions of the *Standards*, the same general types of information are needed for all varieties of tests.

The precise demarcation between those measurement devices used in the fields of educational and psychological testing that do and do not fall within the purview of the *Standards* is difficult to identify. Although the *Standards* applies most directly to standardized measures generally recognized as "tests," such as measures of ability, aptitude, achievement, attitudes, interests, personality, cognitive functioning, and mental health, it may also be usefully applied in varying degrees to a broad range of less formal assessment techniques. Admittedly, it will generally not be possible to apply the *Standards* rigorously to unstandardized questionnaires or to the broad range of unstructured behavior samples used in some forms of clinic- and school-based psychological assessment (e.g., an intake interview), and to instructor-made tests that are used to evaluate student performance in education and training. It is useful to distinguish between devices that lay claim to the concepts and techniques of the field of educational and psychological testing from those which represent nonstandardized or less standardized aids to day-to-day evaluative decisions. Although the principles and concepts underlying the *Standards* can be fruitfully applied to day-to-day decisions, such as when a business owner interviews a job applicant, a manager evalu-

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ates the performance of subordinates, or a coach evaluates a prospective athlete, it would be overreaching to expect that the standards of the educational and psychological testing field be followed by those making such decisions. In contrast, a structured interviewing system developed by a psychologist and accompanied by claims that the system has been found to be predictive of job performance in a variety of other settings falls within the purview of the *Standards*.

Cautions to be Exercised in Using the Standards

Several cautions are important to avoid misinterpreting the *Standards*:

1) Evaluating the acceptability of a test or test application does not rest on the literal satisfaction of every standard in this document, and acceptability cannot be determined by using a checklist. Specific circumstances affect the importance of individual standards, and individual standards should not be considered in isolation. Therefore, evaluating acceptability involves (a) professional judgment that is based on a knowledge of behavioral science, psychometrics, and the community standards in the professional field to which the tests apply; (b) the degree to which the intent of the standard has been satisfied by the test developer and user; (c) the alternatives that are readily available; and (d) research and experiential evidence regarding feasibility of meeting the standard.

2) When tests are at issue in legal proceedings and other venues requiring expert witness testimony it is essential that professional judgment be based on the accepted corpus of knowledge in determining the relevance of particular standards in a given situation. The intent of the *Standards* is to offer guidance for such judgments.

3) Claims by test developers or test users that a test, manual, or procedure satisfies or follows these standards should be made with

care. It is appropriate for developers or users to state that efforts were made to adhere to the *Standards*, and to provide documents describing and supporting those efforts. Blanket claims without supporting evidence should not be made.

4) These standards are concerned with a field that is evolving. Consequently, there is a continuing need to monitor changes in the field and to revise this document as knowledge develops.

5) Prescription of the use of specific technical methods is not the intent of the *Standards*. For example, where specific statistical reporting requirements are mentioned, the phrase "or generally accepted equivalent" always should be understood.

The standards do not attempt to repeat or to incorporate the many legal or regulatory requirements that might be relevant to the issues they address. In some areas, such as the collection, analysis, and use of test data and results for different subgroups, the law may both require participants in the testing process to take certain actions and prohibit those participants from taking other actions. Where it is apparent that one or more standards or comments address an issue on which established legal requirements may be particularly relevant, the standard, comment, or introductory material may make note of that fact. Lack of specific reference to legal requirements, however, does not imply that no relevant requirement exists. In all situations, participants in the testing process should separately consider and, where appropriate, obtain legal advice on legal and regulatory requirements.

The Number of Standards

The number of standards has increased from the 1985 *Standards* for a variety of reasons. First, and most importantly, new developments have led to the addition of new standards. Commonly these deal with new types

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of tests or new uses for existing tests, rather than being broad standards applicable to all tests. Second, on the basis of recognition that some users of the *Standards* may turn only to chapters directly relevant to a given application, certain standards are repeated in different chapters. When such repetition occurs, the essence of the standard is the same. Only the wording, area of application, or elaboration in the comment is changed. Third, standards dealing with important nontechnical issues, such as avoiding conflicts of interest and equitable treatment of all test takers, have been added. Although such topics have not been addressed in prior versions of the *Standards*, they are not likely to be viewed as imposing burdensome new requirements. Thus the increase in the number of standards does not per se signal an increase in the obligations placed on test developers and test users.

Tests as Measures of Constructs

We depart from some historical uses of the term “construct,” which reserve the term for characteristics that are not directly observable, but which are inferred from interrelated sets of observations. This historical perspective invites confusion. Some tests are viewed as measures of constructs, while others are not. In addition, considerable debate has ensued as to whether certain characteristics measured by tests are properly viewed as constructs. Furthermore, the types of validity evidence thought to be suitable can differ as a result of whether a given test is viewed as measuring a construct.

We use the term *construct* more broadly as the concept or characteristic that a test is designed to measure. Rarely, if ever, is there a single possible meaning that can be attached to a test score or a pattern of test responses. Thus, it is always incumbent on a testing professional to specify the construct interpretation that will be made on the basis of the

score or response pattern. The notion that some tests are not under the purview of the *Standards* because they do not measure constructs is contrary to this use of the term. Also, as detailed in chapter 1, evolving conceptualizations of the concept of validity no longer speak of different types of validity but speak instead of different lines of validity evidence, all in service of providing information relevant to a specific intended interpretation of test scores. Thus, many lines of evidence can contribute to an understanding of the construct meaning of test scores.

Organization of This Volume

Part I of the *Standards*, “Test Construction, Evaluation, and Documentation,” contains standards for validity (ch. 1); reliability and errors of measurement (ch. 2); test development and revision (ch. 3); scaling, norming, and score comparability (ch. 4); test administration, scoring, and reporting (ch. 5); and supporting documentation for tests (ch. 6). Part II addresses “Fairness in Testing,” and contains standards on fairness and bias (ch. 7); the rights and responsibilities of test takers (ch. 8); testing individuals of diverse linguistic backgrounds (ch. 9); and testing individuals with disabilities (ch. 10). Part III treats specific “Testing Applications,” and contains standards involving general responsibilities of test users (ch. 11); psychological testing and assessment (ch. 12); educational testing and assessment (ch. 13); testing in employment and credentialing (ch. 14); and testing in program evaluation and public policy (ch. 15).

Each chapter begins with introductory text that provides background for the standards that follow. This revision of the *Standards* contains more extensive introductory text material than its predecessor. Recognizing the common use of the *Standards* in the education of future test developers and users, the committee opted to provide a context for the standards themselves by pre-

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senting more background material than in previous versions. This text is designed to assist in the interpretation of the standards that follow in each chapter. Although the text is at times prescriptive and exhortatory, it should not be interpreted as imposing additional standards.

The *Standards* also contains an index and includes a glossary that provides definitions for terms as they are specifically used in this volume.

PART I

Test Construction, Evaluation, and Documentation

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1. VALIDITY

Background

Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests. Validity is, therefore, the most fundamental consideration in developing and evaluating tests. The process of validation involves accumulating evidence to provide a sound scientific basis for the proposed score interpretations. It is the interpretations of test scores required by proposed uses that are evaluated, not the test itself. When test scores are used or interpreted in more than one way, each intended interpretation must be validated.

Validation logically begins with an explicit statement of the proposed interpretation of test scores, along with a rationale for the relevance of the interpretation to the proposed use. The proposed interpretation refers to the construct or concepts the test is intended to measure. Examples of constructs are mathematics achievement, performance as a computer technician, depression, and self-esteem. To support test development, the proposed interpretation is elaborated by describing its scope and extent and by delineating the aspects of the construct that are to be represented. The detailed description provides a conceptual framework for the test, delineating the knowledge, skills, abilities, processes, or characteristics to be assessed. The framework indicates how this representation of the construct is to be distinguished from other constructs and how it should relate to other variables.

The conceptual framework is partially shaped by the ways in which test scores will be used. For instance, a test of mathematics achievement might be used to place a student in an appropriate program of instruction, to endorse a high school diploma, or to inform a college admissions decision. Each of these uses implies a somewhat different interpretation of the mathematics achievement test

scores: that a student will benefit from a particular instructional intervention, that a student has mastered a specified curriculum, or that a student is likely to be successful with college-level work. Similarly, a test of self-esteem might be used for psychological counseling, to inform a decision about employment, or for the basic scientific purpose of elaborating the construct of self-esteem. Each of these potential uses shapes the specified framework and the proposed interpretation of the test's scores and also has implications for test development and evaluation.

Validation can be viewed as developing a scientifically sound validity argument to support the intended interpretation of test scores and their relevance to the proposed use. The conceptual framework points to the kinds of evidence that might be collected to evaluate the proposed interpretation in light of the purposes of testing. As validation proceeds, and new evidence about the meaning of a test's scores becomes available, revisions may be needed in the test, in the conceptual framework that shapes it, and even in the construct underlying the test.

The wide variety of tests and circumstances makes it natural that some types of evidence will be especially critical in a given case, whereas other types will be less useful. The decision about what types of evidence are important for validation in each instance can be clarified by developing a set of propositions that support the proposed interpretation for the particular purpose of testing. For instance, when a mathematics achievement test is used to assess readiness for an advanced course, evidence for the following propositions might be deemed necessary: (a) that certain skills are prerequisite for the advanced course; (b) that the content domain of the test is consistent with these prerequisite skills; (c) that test scores can be generalized across relevant sets of items; (d) that test scores are not unduly influenced by ancillary variables,

such as writing ability; (e) that success in the advanced course can be validly assessed; and (f) that examinees with high scores on the test will be more successful in the advanced course than examinees with low scores on the test. Examples of propositions in other testing contexts might include, for instance, the proposition that examinees with high general anxiety scores experience significant anxiety in a range of settings, the proposition that a child's score on an intelligence scale is strongly related to the child's academic performance, or the proposition that a certain pattern of scores on a neuropsychological battery indicates impairment characteristic of brain injury. The validation process evolves as these propositions are articulated and evidence is gathered to evaluate their soundness.

Identifying the propositions implied by a proposed test interpretation can be facilitated by considering rival hypotheses that may challenge the proposed interpretation. It is also useful to consider the perspectives of different interested parties, existing experience with similar tests and contexts, and the expected consequences of the proposed test use. Plausible rival hypotheses can often be generated by considering whether a test measures less or more than its proposed construct. Such concerns are referred to as *construct underrepresentation* and *construct-irrelevant variance*.

Construct underrepresentation refers to the degree to which a test fails to capture important aspects of the construct. It implies a narrowed meaning of test scores because the test does not adequately sample some types of content, engage some psychological processes, or elicit some ways of responding that are encompassed by the intended construct. Take, for example, a test of reading comprehension intended to measure children's ability to read and interpret stories with understanding. A particular test might underrepresent the intended construct because it did not contain a sufficient variety of read-

ing passages or ignored a common type of reading material. As another example, a test of anxiety might measure only physiological reactions and not emotional, cognitive, or situational components.

Construct-irrelevant variance refers to the degree to which test scores are affected by processes that are extraneous to its intended construct. The test scores may be systematically influenced to some extent by components that are not part of the construct. In the case of a reading comprehension test, construct-irrelevant components might include an emotional reaction to the test content, familiarity with the subject matter of the reading passages on the test, or the writing skill needed to compose a response. Depending on the detailed definition of the construct, vocabulary knowledge or reading speed might also be irrelevant components. On a test of anxiety, a response bias to under-report anxiety might be considered a source of construct-irrelevant variance.

Nearly all tests leave out elements that some potential users believe should be measured and include some elements that some potential users consider inappropriate. Validation involves careful attention to possible distortions in meaning arising from inadequate representation of the construct and also to aspects of measurement such as test format, administration conditions, or language level that may materially limit or qualify the interpretation of test scores. That is, the process of validation may lead to revisions in the test, the conceptual framework of the test, or both. The revised test would then need validation.

When propositions have been identified that would support the proposed interpretation of test scores, validation can proceed by developing empirical evidence, examining relevant literature, and/or conducting logical analyses to evaluate each of these propositions. Empirical evidence may include both local evidence, produced within the contexts where the test will be used, and evidence from similar testing

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applications in other settings. Use of existing evidence from similar tests and contexts can enhance the quality of the validity argument, especially when current data are limited.

Because a validity argument typically depends on more than one proposition, strong evidence in support of one in no way diminishes the need for evidence to support others. For example, a strong predictor-criterion relationship in an employment setting is not sufficient to justify test use for selection without considering the appropriateness and meaningfulness of the criterion measure. Professional judgment guides decisions regarding the specific forms of evidence that can best support the intended interpretation and use. As in all scientific endeavors, the quality of the evidence is primary. A few lines of solid evidence regarding a particular proposition are better than numerous lines of evidence of questionable quality.

Validation is the joint responsibility of the test developer and the test user. The test developer is responsible for furnishing relevant evidence and a rationale in support of the intended test use. The test user is ultimately responsible for evaluating the evidence in the particular setting in which the test is to be used. When the use of a test differs from that supported by the test developer, the test user bears special responsibility for validation. The standards apply to the validation process, for which the appropriate parties share responsibility. It should be noted that important contributions to the validity evidence are made as other researchers report findings of investigations that are related to the meaning of scores on the test.

Sources of Validity Evidence

The following sections outline various sources of evidence that might be used in evaluating a proposed interpretation of test scores for particular purposes. These sources of evidence may illuminate different aspects of validity,

but they do not represent distinct types of validity. Validity is a unitary concept. It is the degree to which all the accumulated evidence supports the intended interpretation of test scores for the proposed purpose. Like the 1985 *Standards*, this edition refers to types of validity evidence, rather than distinct types of validity. To emphasize this distinction, the treatment that follows does not follow traditional nomenclature (i.e., the use of the terms *content validity* or *predictive validity*). The glossary contains definitions of the traditional terms, explicating the difference between traditional and current use.

EVIDENCE BASED ON TEST CONTENT

Important validity evidence can be obtained from an analysis of the relationship between a test's content and the construct it is intended to measure. Test content refers to the themes, wording, and format of the items, tasks, or questions on a test, as well as the guidelines for procedures regarding administration and scoring. Test developers often work from a specification of the content domain. The content specification carefully describes the content in detail, often with a classification of areas of content and types of items. Evidence based on test content can include logical or empirical analyses of the adequacy with which the test content represents the content domain and of the relevance of the content domain to the proposed interpretation of test scores. Evidence based on content can also come from expert judgments of the relationship between parts of the test and the construct. For example, in developing a licensure test, the major facets of the specific occupation can be specified, and experts in that occupation can be asked to assign test items to the categories defined by those facets. They, or other qualified experts, can then judge the representativeness of the chosen set of items. Sometimes rules or algorithms can be constructed to select or generate items that differ systematically on the various facets of content, according to specifications.

Some tests are based on systematic observations of behavior. For example, a listing of the tasks comprising a job domain may be developed from observations of behavior in a job, together with judgments of subject-matter experts. Expert judgments can be used to assess the relative importance, criticality, and/or frequency of the various tasks. A job sample test can then be constructed from a random or stratified sampling of tasks rated highly on these characteristics. The test can then be administered under standardized conditions in an off-the-job setting.

The appropriateness of a given content domain is related to the specific inferences to be made from test scores. Thus, when considering an available test for a purpose other than that for which it was first developed, it is especially important to evaluate the appropriateness of the original content domain for the proposed new use. In educational program evaluations, for example, tests may properly cover material that receives little or no attention in the curriculum, as well as that toward which instruction is directed. Policymakers can then evaluate student achievement with respect to both content neglected and content addressed. On the other hand, when student mastery of a delivered curriculum is tested for purposes of informing decisions about individual students, such as promotion or graduation, the framework elaborating a content domain is appropriately limited to what students have had an opportunity to learn from the curriculum as delivered.

Evidence about content can be used, in part, to address questions about differences in the meaning or interpretation of test scores across relevant subgroups of examinees. Of particular concern is the extent to which construct underrepresentation or construct-irrelevant components may give an unfair advantage or disadvantage to one or more subgroups of examinees. Careful review of the construct and test content domain by a diverse panel of experts may point to potential sources of

irrelevant difficulty (or easiness) that require further investigation.

EVIDENCE BASED ON RESPONSE PROCESSES

Theoretical and empirical analyses of the response processes of test takers can provide evidence concerning the fit between the construct and the detailed nature of performance or response actually engaged in by examinees. For instance, if a test is intended to assess mathematical reasoning, it becomes important to determine whether examinees are, in fact, reasoning about the material given instead of following a standard algorithm. For another instance, scores on a scale intended to assess the degree of an individual's extroversion or introversion should not be strongly influenced by social conformity.

Evidence based on response processes generally comes from analyses of individual responses. Questioning test takers about their performance strategies or responses to particular items can yield evidence that enriches the definition of a construct. Maintaining records that monitor the development of a response to a writing task, through successive written drafts or electronically monitored revisions, for instance, also provides evidence of process. Documentation of other aspects of performance, like eye movements or response times, may also be relevant to some constructs. Inferences about processes involved in performance can also be developed by analyzing the relationship among parts of the test and between the test and other variables. Wide individual differences in process can be revealing and may lead to reconsideration of certain test formats.

Evidence of response processes can contribute to questions about differences in meaning or interpretation of test scores across relevant subgroups of examinees. Process studies involving examinees from different subgroups can assist in determining the extent to which capabilities irrelevant or ancillary to the construct may be differentially influencing their performance.

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Studies of response processes are not limited to the examinee. Assessments often rely on observers or judges to record and/or evaluate examinees' performances or products. In such cases, relevant validity evidence includes the extent to which the processes of observers or judges are consistent with the intended interpretation of scores. For instance, if judges are expected to apply particular criteria in scoring examinees' performances, it is important to ascertain whether they are, in fact, applying the appropriate criteria and not being influenced by factors that are irrelevant to the intended interpretation. Thus, validation may include empirical studies of how observers or judges record and evaluate data along with analyses of the appropriateness of these processes to the intended interpretation or construct definition.

EVIDENCE BASED ON INTERNAL STRUCTURE

Analyses of the internal structure of a test can indicate the degree to which the relationships among test items and test components conform to the construct on which the proposed test score interpretations are based. The conceptual framework for a test may imply a single dimension of behavior, or it may posit several components that are each expected to be homogeneous, but that are also distinct from each other. For example, a measure of discomfort on a health survey might assess both physical and emotional health. The extent to which item interrelationships bear out the presumptions of the framework would be relevant to validity.

The specific types of analysis and their interpretation depend on how the test will be used. For example, if a particular application posited a series of test components of increasing difficulty, empirical evidence of the extent to which response patterns conformed to this expectation would be provided. A theory that posited unidimensionality would call for evidence of item homogeneity. In this case, the item interrelationships

also provide an estimate of score reliability, but such an index would be inappropriate for tests with a more complex internal structure.

Some studies of the internal structure of tests are designed to show whether particular items may function differently for identifiable subgroups of examinees. Differential item functioning occurs when different groups of examinees with similar overall ability, or similar status on an appropriate criterion, have, on average, systematically different responses to a particular item. This issue is discussed in chapters 3 and 7. However, differential item functioning is not always a flaw or weakness. Subsets of items that have a specific characteristic in common (e.g., specific content, task representation) may function differently for different groups of similarly scoring examinees. This indicates a kind of multidimensionality that may be unexpected or may conform to the test framework.

EVIDENCE BASED ON RELATIONS TO OTHER VARIABLES

Analyses of the relationship of test scores to variables external to the test provide another important source of validity evidence. External variables may include measures of some criteria that the test is expected to predict, as well as relationships to other tests hypothesized to measure the same constructs, and tests measuring related or different constructs. Measures other than test scores, such as performance criteria, are often used in employment settings. Categorical variables, including group membership variables, become relevant when the theory underlying a proposed test use suggests that group differences should be present or absent if a proposed test interpretation is to be supported. Evidence based on relationships with other variables addresses questions about the degree to which these relationships are consistent with the construct underlying the proposed test interpretations.

Convergent and discriminant evidence.

Relationships between test scores and other measures intended to assess similar constructs provide convergent evidence, whereas relationships between test scores and measures purportedly of different constructs provide discriminant evidence. For instance, within some theoretical frameworks, scores on a multiple-choice test of reading comprehension might be expected to relate closely (convergent evidence) to other measures of reading comprehension based on other methods, such as essay responses; conversely, test scores might be expected to relate less closely (discriminant evidence) to measures of other skills, such as logical reasoning. Relationships among different methods of measuring the construct can be especially helpful in sharpening and elaborating score meaning and interpretation.

Evidence of relations with other variables can involve experimental as well as correlational evidence. Studies might be designed, for instance, to investigate whether scores on a measure of anxiety improve as a result of some psychological treatment or whether scores on a test of academic achievement differentiate between instructed and noninstructed groups. If performance increases due to short-term coaching are viewed as a threat to validity, it would be useful to investigate whether coached and uncoached groups perform differently.

Test-criterion relationships. Evidence of the relation of test scores to a relevant criterion may be expressed in various ways, but the fundamental question is always: How accurately do test scores predict criterion performance? The degree of accuracy deemed necessary depends on the purpose for which the test is used.

The criterion variable is a measure of some attribute or outcome that is of primary interest, as determined by test users, who may be administrators in a school system, the management of a firm, or clients. The choice of

the criterion and the measurement procedures used to obtain criterion scores are of central importance. The value of a test-criterion study depends on the relevance, reliability, and validity of the interpretation based on the criterion measure for a given testing application.

Historically, two designs, often called predictive and concurrent, have been distinguished for evaluating test-criterion relationships. A predictive study indicates how accurately test data can predict criterion scores that are obtained at a later time. A concurrent study obtains predictor and criterion information at about the same time. When prediction is actually contemplated, as in education or employment settings, or in planning rehabilitation regimens, predictive studies can retain the temporal differences and other characteristics of the practical situation. Concurrent evidence, which avoids temporal changes, is particularly useful for psychodiagnostic tests or to investigate alternative measures of some specified construct. In general, the choice of research strategy is guided by prior evidence of the extent to which predictive and concurrent studies yield the same or different results in the domain.

Test scores are sometimes used in allocating individuals to different treatments, such as different jobs within an institution, in a way that is advantageous for the institution and for the individuals. In that context, evidence is needed to judge the suitability of using a test when classifying or assigning a person to one job versus another or to one treatment versus another. Classification decisions are supported by evidence that the relationship of test scores to performance criteria is different for different treatments. It is possible for tests to be highly predictive of performance for different education programs or jobs without providing the information necessary to make a comparative judgment of the efficacy of assignments or treatments. In general, decision rules for selection or placement are also influenced by the number of persons to be accepted or the

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numbers that can be accommodated in alternative placement categories.

Evidence about relations to other variables is also used to investigate questions of differential prediction for groups. For instance, a finding that the relation of test scores to a relevant criterion variable differs from one group to another may imply that the meaning of the scores is not the same for members of the different groups, perhaps due to construct underrepresentation or construct-irrelevant components. However, the difference may also imply that the criterion has different meaning for different groups. The differences in test-criterion relationships can also arise from measurement error, especially when group means differ, so such differences do not necessarily indicate differences in score meaning. (See chapter 7.)

Validity generalization. An important issue in educational and employment settings is the degree to which evidence of validity based on test-criterion relations can be generalized to a new situation without further study of validity in that new situation. When a test is used to predict the same or similar criteria (e.g., performance of a given job) at different times or in different places, it is typically found that observed test-criterion correlations vary substantially. In the past, this has been taken to imply that local validation studies are always required. More recently, meta-analytic analyses have shown that in some domains, much of this variability may be due to statistical artifacts such as sampling fluctuations and variations across validation studies in the ranges of test scores and in the reliability of criterion measures. When these and other influences are taken into account, it may be found that the remaining variability in validity coefficients is relatively small. Thus, statistical summaries of past validation studies in similar situations may be useful in estimating test-criterion relationships in a new situation. This practice is referred to as the study of validity generalization.

In some circumstances, there is a strong basis for using validity generalization. This would be the case where the meta-analytic database is large, where the meta-analytic data adequately represent the type of situation to which one wishes to generalize, and where correction for statistical artifacts produces a clear and consistent pattern of validity evidence. In such circumstances, the informational value of a local validity study may be relatively limited. In other circumstances, the inferential leap required for generalization may be much larger. The meta-analytic database may be small, the findings may be less consistent, or the new situation may involve features markedly different from those represented in the meta-analytic database. In such circumstances, situation-specific evidence of validity will be relatively more informative. Although research on validity generalization shows that results of a single local validation study may be quite imprecise, there are situations where a single study, carefully done, with adequate sample size, provides sufficient evidence to support test use in a new situation. This highlights the importance of examining carefully the comparative informational value of local versus meta-analytic studies.

In conducting studies of the generalizability of validity evidence, the prior studies that are included may vary according to several situational facets. Some of the major facets are (a) differences in the way the predictor construct is measured, (b) the type of job or curriculum involved, (c) the type of criterion measure used, (d) the type of test takers, and (e) the time period in which the study was conducted. In any particular study of validity generalization, any number of these facets might vary, and a major objective of the study is to determine empirically the extent to which variation in these facets affects the test-criterion correlations obtained.

The extent to which predictive or concurrent evidence of validity generalization can

be used in new situations is in large measure a function of accumulated research. Although evidence of generalization can often help to support a claim of validity in a new situation, the extent of available data limits the extent to which the claim can be sustained.

The above discussion focuses on the use of cumulative databases to estimate predictor-criterion relationships. Meta-analytic techniques can also be used to summarize other forms of data relevant to other inferences one may wish to draw from test scores in a particular application, such as effects of coaching and effects of certain alterations in testing conditions to accommodate test takers with certain disabilities.

EVIDENCE BASED ON CONSEQUENCES OF TESTING

An issue receiving attention in recent years is the incorporation of the intended and unintended consequences of test use into the concept of validity. Evidence about consequences can inform validity decisions. Here, however, it is important to distinguish between evidence that is directly relevant to validity and evidence that may inform decisions about social policy but falls outside the realm of validity.

Distinguishing between issues of validity and issues of social policy becomes particularly important in cases where differential consequences of test use are observed for different identifiable groups. For example, concerns have been raised about the effect of group differences in test scores on employment selection and promotion, the placement of children in special education classes, and the narrowing of a school's curriculum to exclude learning of objectives that are not assessed. Although information about the consequences of testing may influence decisions about test use, such consequences do not in and of themselves detract from the validity of intended test interpretations. Rather, judgments of validity or invalidity in the light of testing

consequences depend on a more searching inquiry into the sources of those consequences.

Take, as an example, a finding of different hiring rates for members of different groups as a consequence of using an employment test. If the difference is due solely to an unequal distribution of the skills the test purports to measure, and if those skills are, in fact, important contributors to job performance, then the finding of group differences per se does not imply any lack of validity for the intended inference. If, however, the test measured skill differences unrelated to job performance (e.g., a sophisticated reading test for a job that required only minimal functional literacy), or if the differences were due to the test's sensitivity to some examinee characteristic not intended to be part of the test construct, then validity would be called into question, even if test scores correlated positively with some measure of job performance. Thus, evidence about consequences may be directly relevant to validity when it can be traced to a source of invalidity such as construct underrepresentation or construct-irrelevant components. Evidence about consequences that cannot be so traced—that in fact reflects valid differences in performance—is crucial in informing policy decisions but falls outside the technical purview of validity.

Tests are commonly administered in the expectation that some benefit will be realized from the intended use of the scores. A few of the many possible benefits are selection of efficacious treatments for therapy, placement of workers in suitable jobs, prevention of unqualified individuals from entering a profession, or improvement of classroom instructional practices. A fundamental purpose of validation is to indicate whether these specific benefits are likely to be realized. Thus, in the case of a test used in placement decisions, the validation would be informed by evidence that alternative placements, in fact, are differentially beneficial to the persons and the institution. In the case of employment testing,

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if a test publisher claims that use of the test will result in reduced employee training costs, improved workforce efficiency, or some other benefit, then the validation would be informed by evidence in support of that claim.

Claims are sometimes made for benefits of testing that go beyond direct uses of the test scores themselves. Educational tests, for example, may be advocated on the grounds that their use will improve student motivation or encourage changes in classroom instructional practices by holding educators accountable for valued learning outcomes. Where such claims are central to the rationale advanced for testing, the direct examination of testing consequences necessarily assumes even greater importance. The validation process in such cases would be informed by evidence that the anticipated benefits of testing are being realized.

Integrating the Validity Evidence

A sound validity argument integrates various strands of evidence into a coherent account of the degree to which existing evidence and theory support the intended interpretation of test scores for specific uses. It encompasses evidence gathered from new studies and evidence available from earlier reported research. The validity argument may indicate the need for refining the definition of the construct, may suggest revisions in the test or other aspects of the testing process, and may indicate areas needing further study.

Ultimately, the validity of an intended interpretation of test scores relies on all the available evidence relevant to the technical quality of a testing system. This includes evidence of careful test construction; adequate score reliability; appropriate test administration and scoring; accurate score scaling, equating, and standard setting; and careful attention to fairness for all examinees, as described in subsequent chapters of the *Standards*.

Standard 1.1

A rationale should be presented for each recommended interpretation and use of test scores, together with a comprehensive summary of the evidence and theory bearing on the intended use or interpretation.

Comment: The rationale should indicate what propositions are necessary to investigate the intended interpretation. The comprehensive summary should combine logical analysis with empirical evidence to provide support for the test rationale. Evidence may come from studies conducted locally, in the setting where the test is to be used; from specific prior studies; or from comprehensive statistical syntheses of available studies meeting clearly specified criteria. No type of evidence is inherently preferable to others; rather, the quality and relevance of the evidence to the intended test use determine the value of a particular kind of evidence. A presentation of empirical evidence on any point should give due weight to all relevant findings in the scientific literature, including those inconsistent with the intended interpretation or use. Test developers have the responsibility to provide support for their own recommendations, but test users are responsible for evaluating the quality of the validity evidence provided and its relevance to the local situation.

Standard 1.2

The test developer should set forth clearly how test scores are intended to be interpreted and used. The population(s) for which a test is appropriate should be clearly delimited, and the construct that the test is intended to assess should be clearly described.

Comment: Statements about validity should refer to particular interpretations and uses. It is incorrect to use the unqualified phrase "the validity of the test." No test is valid for all purposes or in all situations. Each recom-

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mended use or interpretation requires validation and should specify in clear language the population for which the test is intended, the construct it is intended to measure, and the manner and contexts in which test scores are to be employed.

Standard 1.3

If validity for some common or likely interpretation has not been investigated, or if the interpretation is inconsistent with available evidence, that fact should be made clear and potential users should be cautioned about making unsupported interpretations.

Comment: If past experience suggests that a test is likely to be used inappropriately for certain kinds of decisions, specific warnings against such uses should be given. On the other hand, no two situations are ever identical, so some generalization by the user is always necessary. Professional judgment is required to evaluate the extent to which existing validity evidence supports a given test use.

Standard 1.4

If a test is used in a way that has not been validated, it is incumbent on the user to justify the new use, collecting new evidence if necessary.

Comment: Professional judgment is required to evaluate the extent to which existing validity evidence applies in the new situation and to determine what new evidence may be needed. The amount and kinds of new evidence required may be influenced by experience with similar prior test uses or interpretations and by the amount, quality, and relevance of existing data.

Standard 1.5

The composition of any sample of examinees from which validity evidence is

obtained should be described in as much detail as is practical, including major relevant sociodemographic and developmental characteristics.

Comment: Statistical findings can be influenced by factors affecting the sample on which the results are based. When the sample is intended to represent a population, that population should be described, and attention should be drawn to any systematic factors that may limit the representativeness of the sample. Factors that might reasonably be expected to affect the results include self-selection, attrition, linguistic prowess, disability status, and exclusion criteria, and others. If the subjects of a validity study are patients, for example, then the diagnoses of the patients are important, as well as other characteristics, such as the severity of the diagnosed condition. For tests used in industry, the employment status (e.g., applicants versus current job holders), the general level of experience and educational background and the gender and ethnic composition of the sample may be relevant information. For tests used in educational settings, relevant information may include educational background, developmental level, community characteristics, or school admissions policies, as well as the gender and ethnic composition of the sample. Sometimes restrictions about privacy preclude obtaining such population information.

Standard 1.6

When the validation rests in part on the appropriateness of test content, the procedures followed in specifying and generating test content should be described and justified in reference to the construct the test is intended to measure or the domain it is intended to represent. If the definition of the content sampled incorporates criteria such as importance, frequency, or criticality, these criteria should also be clearly explained and justified.

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Comment: For example, test developers might provide a logical structure that maps the items on the test to the content domain, illustrating the relevance of each item and the adequacy with which the set of items represents the content domain. Areas of the content domain that are not included among the test items could be indicated as well.

Standard 1.7

When a validation rests in part on the opinions or decisions of expert judges, observers, or raters, procedures for selecting such experts and for eliciting judgments or ratings should be fully described. The qualifications, and experience, of the judges should be presented. The description of procedures should include any training and instructions provided, should indicate whether participants reached their decisions independently, and should report the level of agreement reached. If participants interacted with one another or exchanged information, the procedures through which they may have influenced one another should be set forth.

Comment: Systematic collection of judgments or opinions may occur at many points in test construction (e.g., in eliciting expert judgments of content appropriateness or adequate content representation), in formulating rules or standards for score interpretation (e.g., in setting cut scores), or in test scoring (e.g., rating of essay responses). Whenever such procedures are employed, the quality of the resulting judgments is important to the validation. It may be entirely appropriate to have experts work together to reach consensus, but it would not then be appropriate to treat their respective judgments as statistically independent.

Standard 1.8

If the rationale for a test use or score interpretation depends on premises about the psychological processes or cognitive opera-

tions used by examinees, then theoretical or empirical evidence in support of those premises should be provided. When statements about the processes employed by observers or scorers are part of the argument for validity, similar information should be provided.

Comment: If the test specification delineates the processes to be assessed, then evidence is needed that the test items do, in fact, tap the intended processes.

Standard 1.9

If a test is claimed to be essentially unaffected by practice and coaching, then the sensitivity of test performance to change with these forms of instruction should be documented.

Comment: Materials to aid in score interpretation should summarize evidence indicating the degree to which improvement with practice or coaching can be expected. Also, materials written for test takers should provide practical guidance about the value of test preparation activities, including coaching.

Standard 1.10

When interpretation of performance on specific items, or small subsets of items, is suggested, the rationale and relevant evidence in support of such interpretation should be provided. When interpretation of individual item responses is likely but is not recommended by the developer, the user should be warned against making such interpretations.

Comment: Users should be given sufficient guidance to enable them to judge the degree of confidence warranted for any use or interpretation recommended by the test developer. Test manuals and score reports should discourage overinterpretation of information that may be subject to considerable error. This is especially important if interpretation

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of performance on isolated items, small subsets of items, or subtest scores is suggested.

Standard 1.11

If the rationale for a test use or interpretation depends on premises about the relationships among parts of the test, evidence concerning the internal structure of the test should be provided.

Comment: It might be claimed, for example, that a test is essentially unidimensional. Such a claim could be supported by a multivariate statistical analysis, such as a factor analysis, showing that the score variability attributable to one major dimension was much greater than the score variability attributable to any other identified dimension. When a test provides more than one score, the interrelationships of those scores should be shown to be consistent with the construct(s) being assessed.

Standard 1.12

When interpretation of subscores, score differences, or profiles is suggested, the rationale and relevant evidence in support of such interpretation should be provided. Where composite scores are developed, the basis and rationale for arriving at the composites should be given.

Comment: When a test provides more than one score, the distinctiveness of the separate scores should be demonstrated, and the interrelationships of those scores should be shown to be consistent with the construct(s) being assessed. Moreover, evidence for the validity of interpretations of two separate scores would not necessarily justify an interpretation of the difference between them. Rather, the rationale and supporting evidence must pertain directly to the specific score or score combination to be interpreted or used.

Standard 1.13

When validity evidence includes statistical analyses of test results, either alone or together with data on other variables, the conditions under which the data were collected should be described in enough detail that users can judge the relevance of the statistical findings to local conditions. Attention should be drawn to any features of a validation data collection that are likely to differ from typical operational testing conditions and that could plausibly influence test performance.

Comment: Such conditions might include (but would not be limited to) the following: examinee motivation or prior preparation, the distribution of test scores over examinees, the time allowed for examinees to respond or other administrative conditions, examiner training or other examiner characteristics, the time intervals separating collection of data on different measures, or conditions that may have changed since the validity evidence was obtained.

Standard 1.14

When validity evidence includes empirical analyses of test responses together with data on other variables, the rationale for selecting the additional variables should be provided. Where appropriate and feasible, evidence concerning the constructs represented by other variables, as well as their technical properties, should be presented or cited. Attention should be drawn to any likely sources of dependence (or lack of independence) among variables other than dependencies among the construct(s) they represent.

Comment: The patterns of association between and among scores on the instrument under study and other variables should be consistent with theoretical expectations. The additional variables might be demographic

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characteristics, indicators of treatment conditions, or scores on other measures. They might include intended measures of the same construct or of different constructs. The reliability of scores from such other measures and the validity of intended interpretations of scores from these measures are an important part of the validity evidence for the instrument under study. If such variables include composite scores, the construction of the composites should be explained. In addition to considering the properties of each variable in isolation, it is important to guard against faulty interpretations arising from spurious sources of dependency among measures, including correlated errors or shared variance due to common methods of measurement or common elements.

Standard 1.15

When it is asserted that a certain level of test performance predicts adequate or inadequate criterion performance, information about the levels of criterion performance associated with given levels of test scores should be provided.

Comment: Regression equations are more useful than correlation coefficients, which are generally insufficient to fully describe patterns of association between tests and other variables. Means, standard deviations, and other statistical summaries are needed, as well as information about the distribution of criterion performances conditional upon a given test score. Evidence of overall association between variables should be supplemented by information about the form of that association and about the variability associated with that association in different ranges of test scores. Note that data collections employing examinees selected for their extreme scores on one or more measures (extreme groups) typically cannot provide adequate information about the association.

Standard 1.16

When validation relies on evidence that test scores are related to one or more criterion variables, information about the suitability and technical quality of the criteria should be reported.

Comment: The description of each criterion variable should include evidence concerning its reliability, the extent to which it represents the intended construct (e.g., job performance), and the extent to which it is likely to be influenced by extraneous sources of variance. Special attention should be given to sources that previous research suggests may introduce extraneous variance that might bias the criterion for or against identifiable groups.

Standard 1.17

If test scores are used in conjunction with other quantifiable variables to predict some outcome or criterion, regression (or equivalent) analyses should include those additional relevant variables along with the test scores.

Comment: In general, if several predictors of some criterion are available, the optimum combination of predictors cannot be determined solely from separate, pairwise examinations of the criterion variable with each separate predictor in turn. It is often informative to estimate the increment in predictive accuracy that may be expected when each variable, including the test score, is introduced in addition to all other available variables. Analyses involving multiple predictors should be verified by cross-validation or equivalent analysis whenever feasible, and the precision of estimated regression coefficients should be reported.

Standard 1.18

When statistical adjustments, such as those for restriction of range or attenuation, are made, both adjusted and unadjusted coefficients

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cients, as well as the specific procedure used, and all statistics used in the adjustment, should be reported.

Comment: The correlation between two variables, such as test scores and criterion measures, depends on the range of values on each variable. For example, the test scores and the criterion values of selected applicants will typically have a smaller range than the scores of all applicants. Statistical methods are available for adjusting the correlation to reflect the population of interest rather than the sample available. Such adjustments are often appropriate, as when comparing results across various situations. Reporting an adjusted correlation should be accompanied by a statement of the method and the statistics used in making the adjustment.

Standard 1.19

If a test is recommended for use in assigning persons to alternative treatments or is likely to be so used, and if outcomes from those treatments can reasonably be compared on a common criterion, then, whenever feasible, supporting evidence of differential outcomes should be provided.

Comment: If a test is used for classification into alternative occupational, therapeutic, or educational programs, it is not sufficient just to show that the test predicts treatment outcomes. Support for the validity of the classification procedure is provided by showing that the test is useful in determining which persons are likely to profit differentially from one treatment or another. Treatment categories may have to be combined to assemble sufficient cases for statistical analysis. It is recognized, however, that such research may not be feasible, because ethical and legal constraints on differential assignments may forbid control groups.

Standard 1.20

When a meta-analysis is used as evidence of the strength of a test-criterion relationship, the test and the criterion variables in the local situation should be comparable with those in the studies summarized. If relevant research includes credible evidence that any other features of the testing application may influence the strength of the test-criterion relationship, the correspondence between those features in the local situation and in the meta-analysis should be reported. Any significant disparities that might limit the applicability of the meta-analytic findings to the local situation should be noted explicitly.

Comment: The meta-analysis should incorporate all available studies meeting explicitly stated inclusion criteria. Meta-analytic evidence used in test validation typically is based on a number of tests measuring the same or very similar constructs and criterion measures that likewise measure the same or similar constructs. A meta-analytic study may also be limited to a single test and a single criterion. For each study included in the analysis, the test-criterion relationship is expressed in some common metric, often as an *effect size*. The strength of the test-criterion relationship may be moderated by features of the situation in which the test and criterion measures were obtained (e.g., types of jobs, characteristics of test takers, time interval separating collection of test and criterion measures, year or decade in which the data were collected). If test-criterion relationships vary according to such moderator variables, then, the numbers of studies permitting, the meta-analysis should report separate estimated effect size distributions conditional upon relevant situational features. This might be accomplished, for example, by reporting separate distributions for subsets of studies or by estimating the magnitudes of the influences of situational features on effect sizes.

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Standard 1.21

Any meta-analytic evidence used to support an intended test use should be clearly described, including methodological choices in identifying and coding studies, correcting for artifacts, and examining potential moderator variables. Assumptions made in correcting for artifacts such as criterion unreliability and range restriction should be presented, and the consequences of these assumptions made clear.

Comment: Meta-analysis inevitably involves judgments regarding a number of methodological choices. The bases for these judgments should be articulated. In the case of choices involving some degree of uncertainty, such as artifact corrections based on assumed values, the uncertainty should be acknowledged and the degree to which conclusions about validity hinge on these assumptions should be examined and reported.

Standard 1.22

When it is clearly stated or implied that a recommended test use will result in a specific outcome, the basis for expecting that outcome should be presented, together with relevant evidence.

Comment: If it is asserted, for example, that using a given test for employee selection will result in reduced employee errors or training costs, evidence in support of that assertion should be provided. A given claim for the benefits of test use may be supported by logical or theoretical argument as well as empirical data. Due weight should be given to findings in the scientific literature that may be inconsistent with the stated expectation.

Standard 1.23

When a test use or score interpretation is recommended on the grounds that testing or

the testing program per se will result in some indirect benefit in addition to the utility of information from the test scores themselves, the rationale for anticipating the indirect benefit should be made explicit. Logical or theoretical arguments and empirical evidence for the indirect benefit should be provided. Due weight should be given to any contradictory findings in the scientific literature, including findings suggesting important indirect outcomes other than those predicted.

Comment: For example, certain educational testing programs have been advocated on the grounds that they would have a salutary influence on classroom instructional practices or would clarify students' understanding of the kind or level of achievement they were expected to attain. To the extent that such claims enter into the justification for a testing program, they become part of the validity argument for test use and so should be examined as part of the validation effort. Due weight should be given to evidence against such predictions, for example, evidence that under some conditions educational testing may have a negative effect on classroom instruction.

Standard 1.24

When unintended consequences result from test use, an attempt should be made to investigate whether such consequences arise from the test's sensitivity to characteristics other than those it is intended to assess or to the test's failure fully to represent the intended construct.

Comment: The validity of test score interpretations may be limited by construct-irrelevant components or construct underrepresentation. When unintended consequences appear to stem, at least in part, from the use of one or more tests, it is especially important to check

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that these consequences do not arise from such sources of invalidity. Although group differences, in and of themselves, do not call into question the validity of a proposed interpretation, they may increase the salience of plausible rival hypotheses that should be investigated as part of the validation effort.

2. RELIABILITY AND ERRORS OF MEASUREMENT

Background

A test, broadly defined, is a set of tasks designed to elicit or a scale to describe examinee behavior in a specified domain, or a system for collecting samples of an individual's work in a particular area. Coupled with the device is a scoring procedure that enables the examiner to quantify, evaluate, and interpret the behavior or work samples. *Reliability* refers to the consistency of such measurements when the testing procedure is repeated on a population of individuals or groups.

The discussion that follows introduces concepts and procedures that may not be familiar to some readers. It is not expected that the brief definitions and explanations presented here will be sufficient to enable the less sophisticated reader to become adequately conversant with these developments. To achieve a better understanding, such readers may need to consult more comprehensive treatments in the measurement literature.

The usefulness of behavioral measurements presupposes that individuals and groups exhibit some degree of stability in their behavior. However, successive samples of behavior from the same person are rarely identical in all pertinent respects. An individual's performances, products, and responses to sets of test questions vary in their quality or character from one occasion to another, even under strictly controlled conditions. This variation is reflected in the examinee's scores. The causes of this variability are generally unrelated to the purposes of measurement. An examinee may try harder, may make luckier guesses, be more alert, feel less anxious, or enjoy better health on one occasion than another. An examinee may have knowledge, experience, or understanding that is more relevant to some tasks than to others in the domain sampled by the test. Some individuals may exhibit less

variation in their scores than others, but no examinee is completely consistent. Because of this variation and, in some instances, because of subjectivity in the scoring process, an individual's obtained score and the average score of a group will always reflect at least a small amount of measurement error.

To say that a score includes a component of error implies that there is a hypothetical error-free value that characterizes an examinee at the time of testing. In classical test theory this error-free value is referred to as the person's *true score* for the test or measurement procedure. It is conceptualized as the hypothetical average score resulting from many repetitions of the test or alternate forms of the instrument. In statistical terms, the true score is a personal parameter and each observed score of an examinee is presumed to estimate this parameter. Under an approach to reliability estimation known as *generalizability theory*, a comparable concept is referred to as an examinee's *universe score*. Under *item response theory (IRT)*, a closely related concept is called an examinee's *ability or trait parameter*, though observed scores and trait parameters may be stated in different units. The hypothetical difference between an examinee's observed score on any particular measurement and the examinee's true or universe score for the procedure is called *measurement error*.

The definition of what constitutes a standardized test or measurement procedure has broadened significantly in recent years. At one time the cardinal features of most standardized tests were consistency of the test materials from examinee to examinee, close adherence to stipulated procedures for test administration, and use of prescribed scoring rules that could be applied with a high degree of consistency. These features were, in fact, what made a test "standardized," and they made meaningful norms possible. In employ-

ment settings and certification programs, flexible measurement procedures have been in use for many years. Individualized oral examinations, simulations, analyses of extended case reports, and performance in real-life settings such as clinics are now commonplace. In education, however, large-scale testing programs with a high degree of flexibility in test format and administrative procedures are a relatively recent development. In some programs cumulative portfolios of student work have been substituted for more traditional end-of-year tests of achievement. Other programs now allow examinees to choose their own topics to demonstrate their abilities. Still others permit or encourage small groups of examinees to work cooperatively in completing the test. A science examination, for example, might involve a team of high school students who conduct a study of the sources of pollution in local streams and prepare a report on their findings. Examinations of this kind raise complex issues regarding the domain represented by the test and about the generalizability of individual and group scores. Each step toward greater flexibility almost inevitably enlarges the scope and magnitude of measurement error. However, it is possible that some of the resultant sacrifices in reliability may reduce construct irrelevance or *construct underrepresentation in an assessment program*.

Characteristics and Implications of Measurement Error

Errors of measurement are generally viewed as random and unpredictable. They are conceptually distinguished from systematic errors, which may also affect performance of individuals or groups, but in a consistent rather than a random manner. For example, a systematic group error would occur as a result of differences in the difficulty of test forms that have not been adequately equated. When one test form is less difficult than another, examinees

who take the easier form may be expected to earn a higher average score than those who take the more difficult form. Such a difference would not be considered an error of measurement under most methods of quantifying and summarizing error, though generalizability theory would permit test form differences to be recognized as an error source.

The systematic factors that may differentially affect the performance of individual test takers are not as easily detected or overridden as those affecting groups. For example, some examinees experience levels of test anxiety that severely impair cognitive efficiency. The presence of such a condition can sometimes be recognized in an examinee, but the effect cannot be overcome by statistical adjustments. The individual systematic errors are not generally regarded as an element that contributes to unreliability. Rather, they constitute a source of construct-irrelevant variance and thus may detract from validity.

Important sources of measurement error may be broadly categorized as those rooted within the examinees and those external to them. Fluctuations in the level of an examinee's motivation, interest, or attention and the inconsistent application of skills are clearly internal factors that may lead to score inconsistencies. Differences among testing sites in their freedom from distractions, the random effects of scorer subjectivity, and variation in scorer standards are examples of external factors. The potency and importance of any particular source depend on the specific conditions under which the measures are taken, how performances are scored, and the interpretations made from the scores. A particular factor, such as the subjectivity in scoring, may be a significant source of measurement error in some assessments and a minor consideration in others.

Some changes in scores from one occasion to another, it should be noted, are not regarded as error, because they result, in part, from an intervention, learning, or maturation

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that has occurred between the initial and final measures. The difference within an individual indicates, to some extent, the effects of the intervention or the extent of growth. In such settings, change per se constitutes the phenomenon of interest. The difference or the change score then becomes the measure to which reliability pertains.

Measurement error reduces the usefulness of measures. It limits the extent to which test results can be generalized beyond the particulars of a specific application of the measurement process. Therefore, it reduces the confidence that can be placed in any single measurement. Because random measurement errors are inconsistent and unpredictable, they cannot be removed from observed scores. However, their aggregate magnitude can be summarized in several ways, as discussed below.

Summarizing Reliability Data

Information about measurement error is essential to the proper evaluation and use of an instrument. This is true whether the measure is based on the responses to a specific set of questions, a portfolio of work samples, the performance of a task, or the creation of an original product. The ideal approach to the study of reliability entails independent replication of the entire measurement process. However, only a rough or partial approximation of such replication is possible in many testing situations, and investigation of measurement error may require special studies that depart from routine testing procedures. Nevertheless, it should be the goal of test developers to investigate test reliability as fully as practical considerations permit. No test developer is exempt from this responsibility.

The critical information on reliability includes the identification of the major sources of error, summary statistics bearing on the size of such errors, and the degree of generalizability of scores across alternate

forms, scorers, administrations, or other relevant dimensions. It also includes a description of the examinee population to whom the foregoing data apply, as the data may accurately reflect what is true of one population but misrepresent what is true of another. For example, a given reliability coefficient or estimated standard error derived from scores of a nationally representative sample may differ significantly from that obtained for a more homogeneous sample drawn from one gender, one ethnic group, or one community.

Reliability information may be reported in terms of variances or standard deviations of measurement errors, in terms of one or more coefficients, or in terms of IRT-based test information functions. The standard error of measurement is the standard deviation of a hypothetical distribution of measurement errors that arises when a given population is assessed via a particular test or procedure. The overall variance of measurement errors is actually a weighted average of the values that hold at various true score levels. The variance at a particular level is called a *conditional error variance* and its square root a *conditional standard error*. Traditionally, three broad categories of reliability coefficients have been recognized: (a) coefficients derived from the administration of parallel forms in independent testing sessions (alternate-form coefficients); (b) coefficients obtained by administration of the same instrument on separate occasions (test-retest or stability coefficients); and (c) coefficients based on the relationships among scores derived from individual items or subsets of the items within a test, all data accruing from a single administration (internal consistency coefficients). Where test scoring involves a high level of judgment, indexes of scorer consistency are commonly obtained. With the development of generalizability theory, the foregoing three categories may now be seen as special cases of a more general classification: generalizability coefficients.

Like traditional reliability coefficients, a *generalizability coefficient* is defined as the ratio of true or universe score variance to observed score variance. Unlike traditional approaches to the study of reliability, however, generalizability theory permits the researcher to specify and estimate the various components of true score variance, error variance, and observed score variance. Estimation is typically accomplished by the application of the techniques of analysis of variance. Of special interest are the separate numerical estimates of the components of overall error variance. Such estimates permit examination of the contribution of each source of error to the overall measurement process. The generalizability approach also makes possible the estimation of coefficients that apply to a wide variety of potential measurement designs.

The test information function, an important result of IRT, efficiently summarizes how well the test discriminates among individuals at various levels of the ability or trait being assessed. Under the IRT conceptualization, a mathematical function called the *item characteristic curve* or *item response function* is used as a model to represent the increasing proportion of correct responses to an item for groups at progressively higher levels of the ability or trait being measured. Given an adequate database, the parameters of the characteristic curve of each item in a test can be estimated. The test information function can then be approximated. This function may be viewed as a mathematical statement of the precision of measurement at each level of the given trait. Precision, in the IRT context, is analogous to the reciprocal of the conditional error variance of classical test theory.

Interpretation of Reliability Data

In general, reliability coefficients are most useful in comparing tests or measurement procedures, particularly those that yield scores in different units or metrics. However, such comparisons

are rarely straightforward. Allowance must be made for differences in the variability of the groups on which the coefficients are based, the techniques used to obtain the coefficients, the sources of error reflected in the coefficients, and the lengths of the instruments being compared in terms of testing time.

Generalizability coefficients and the many coefficients included under the traditional categories may appear to be interchangeable, but some convey quite different information from others. A coefficient in any given category may encompass errors of measurement from a highly restricted perspective, a very broad perspective, or some point between these extremes. For example, a coefficient may reflect error due to scorer inconsistencies but not reflect the variation that characterizes a succession of examinee performances or products. A coefficient may reflect only the internal consistency of item responses within an instrument and fail to reflect measurement error associated with day-to-day changes in examinee health, efficiency, or motivation.

It should not be inferred, however, that alternate-form or test-retest coefficients based on test administrations several days or weeks apart are always preferable to internal consistency coefficients. For many tests, internal consistency coefficients do not differ significantly from alternate-form coefficients. Where only one form of a test exists, retesting may result in an inflated correlation between the first and second scores due to idiosyncratic features of the test or to examinee recall of initial responses. Also, an individual's status on some attributes, such as mood or emotional state, may change significantly in a short period of time. In the assessment of such constructs the multiple measures that give rise to reliability estimates should be obtained within the short period in which the attribute remains stable. Therefore, for characteristics of this kind an internal consistency coefficient may be preferred.

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The standard error of measurement is generally more relevant than the reliability coefficient once a measurement procedure has been adopted and interpretation of scores has become the user's primary concern. It should be noted that standard errors share some of the ambiguities which characterize reliability coefficients, and estimates may vary in their quality. Information about the precision of measurement at each of several widely spaced score levels—that is, conditional standard errors—is usually a valuable supplement to the single statistic for all score levels combined. Like reliability and generalizability coefficients, standard errors may reflect variation from many sources of error or only a few. For most purposes, a more comprehensive standard error is more informative than a less comprehensive value. However, there are many exceptions to this generalization. Practical constraints often preclude conduct of the kinds of studies that would yield estimates of the preferred standard errors.

Measurements derived from observations of behavior or evaluations of products are especially sensitive to a variety of error factors. These include evaluator biases and idiosyncrasies, scoring subjectivity, and intra-examinee factors that cause variation from one performance or product to another. The methods of generalizability theory are well suited to the investigation of the reliability of the scores on such measures. Estimates of the error variance associated with each specific source and with the interactions between sources indicate the extent to which examinee scores may be generalized to a population of scorers and to a universe of products or performances.

The interpretations of test scores may be broadly categorized as *relative* or *absolute*. Relative interpretations convey the standing of an individual or group within a reference population. Absolute interpretations relate the status of an individual or group to defined standards. These standards may originate in empirical data for one or more populations or

be based entirely on authoritative judgment. Different values of the standard error apply to the two types of interpretations.

The test information function can be perceived an alternative to traditional indices of measurement precision, but there are important distinctions that should be noted. Standard errors under classical test theory can be derived by several different approaches. These yield similar, but not identical, results. More significantly, standard errors, like reliability coefficients, may reflect a broad configuration of error factors or a restricted configuration, depending on the design of the reliability study. Test information functions, on the other hand, are limited to the restricted definition of measurement error that is associated with internal consistency reliabilities. In addition, under IRT several different mathematical models have been proposed and accepted as the basic form of the item characteristic curve. Adoption of one model rather than another can have a material effect on the derived test information function.

A final consideration has significant implications for both IRT and classical approaches to quantification of test score precision. It is this: Indices of precision depend on the scale in which they are reported. An index stated in terms of raw scores or the trait level estimates of IRT may convey a radically different perception of reliability than the same index restated in terms of derived scores. This same contrast may hold for conditional standard errors. In terms of the basic score scale, precision may appear to be high at one score level, low at another. But when the conditional standard errors are restated in units of derived scores, such as grade equivalents or standard scores, quite different trends in comparative precision may emerge. Therefore, measurement precision under both theories very strongly depends on the scale in which test scores are reported and interpreted.

Precision and consistency in measurement are always desirable. However, the need

for precision increases as the consequences of decisions and interpretations grow in importance. If a decision can and will be corroborated by information from other sources or if an erroneous initial decision can be quickly corrected, scores with modest reliability may suffice. But if a test score leads to a decision that is not easily reversed, such as rejection or admission of a candidate to a professional school or the decision by a jury that a serious injury was sustained, the need for a high degree of precision is much greater.

Where the purpose of measurement is classification, some measurement errors are more serious than others. An individual who is far above or far below the value established for pass/fail or for eligibility for a special program can be mismeasured without serious consequences. Mismeasurement of examinees whose true scores are close to the cut score is a more serious concern. The techniques used to quantify reliability should recognize these circumstances. This can be done by reporting the conditional standard error in the vicinity of the critical value.

Some authorities have proposed that a semantic distinction be made between "reliability of scores" and "degree of agreement in classification." The former term would be reserved for analysis of score variation under repeated measurement. The term *classification consistency* or *inter-rater agreement*, rather than *reliability*, would be used in discussions of consistency of classification. Adoption of such usage would make it clear that the importance of an error of any given size depends on the proximity of the examinee's score to the cut score. However, it should be recognized that the degree of consistency or agreement in examinee classification is specific to the cut score employed and its location within the score distribution.

Average scores of groups, when interpreted as measures of program effectiveness, involve error factors that are not identical to those that operate at the individual level. For

large groups, the positive and negative measurement errors of individuals may average out almost completely in group means. However, the sampling errors associated with the random sampling of persons who are tested for purposes of program evaluation are still present. This component of the variation in the mean achievement of school classes from year to year or in the average expressed satisfaction of successive samples of the clients of a program may constitute a potent source of error in program evaluations. It can be a significant source of error in inferences about programs even if there is a high degree of precision in individual test scores. Therefore, when an instrument is used to make group judgments, reliability data must bear directly on the interpretations specific to groups. Standard errors appropriate to individual scores are not appropriate measures of the precision of group averages. A more appropriate statistic is the standard error of the observed score means. Generalizability theory can provide more refined indices when the sources of measurement error are numerous and complex.

Typically, developers and distributors of tests have primary responsibility for obtaining and reporting evidence of reliability or test information functions. The user must have such data to make an informed choice among alternative measurement approaches and will generally be unable to conduct reliability studies prior to operational use of an instrument. In some instances, however, local users of a test or procedure must accept at least partial responsibility for documenting the precision of measurement. This obligation holds when one of the primary purposes of measurement is to rank or classify examinees within the local population. It also holds when users must rely on local scorers who are trained to use the scoring rubrics provided by the test developer. In such settings, local factors may materially affect the magnitude of error variance and observed score variance. Therefore, the reliability of

scores may differ appreciably from that reported by the developer.

The reporting of reliability coefficients alone, with little detail regarding the methods used to estimate the coefficient, the nature of the group from which the data were derived, and the conditions under which the data were obtained constitutes inadequate documentation. General statements to the effect that a test is "reliable" or that it is "sufficiently reliable to permit interpretations of individual scores" are rarely, if ever, acceptable. It is the user who must take responsibility for determining whether or not scores are sufficiently trustworthy to justify anticipated uses and interpretations. Of course, test constructors and publishers are obligated to provide sufficient data to make informed judgments possible.

As the foregoing comments emphasize, there is no single, preferred approach to quantification of reliability. No single index adequately conveys all of the relevant facts. No one method of investigation is optimal in all situations, nor is the test developer limited to a single approach for any instrument. The choice of estimation techniques and the minimum acceptable level for any index remain a matter of professional judgment.

Although reliability is discussed here as an independent characteristic of test scores, it should be recognized that the level of reliability of scores has implications for the validity of score interpretations. Reliability data ultimately bear on the repeatability of the behavior elicited by the test and the consistency of the resultant scores. The data also bear on the consistency of classifications of individuals derived from the scores. To the extent that scores reflect random errors of measurement, their potential for accurate prediction of criteria, for beneficial examinee diagnosis, and for wise decision making is limited. Relatively unreliable scores, in conjunction with other convergent information, may sometimes be of value to a test user, but the level of a score's reliability places limits on its unique contribution to validity for all purposes.

Standard 2.1

For each total score, subscore, or combination of scores that is to be interpreted, estimates of relevant reliabilities and standard errors of measurement or test information functions should be reported.

Comment: It is not sufficient to report estimates of reliabilities and standard errors of measurement only for total scores when subscores are also interpreted. The form-to-form and day-to-day consistency of total scores on a test may be acceptably high, yet subscores may have unacceptably low reliability. For all scores to be interpreted, users should be supplied with reliability data in enough detail to judge whether scores are precise enough for the users' intended interpretations. Composites formed from selected subtests within a test battery are frequently proposed for predictive and diagnostic purposes. Users need information about the reliability of such composites.

Standard 2.2

The standard error of measurement, both overall and conditional (if relevant), should be reported both in raw score or original scale units and in units of each derived score recommended for use in test interpretation.

Comment: The most common derived scores include standard scores, grade or age equivalents, and percentile ranks. Because raw scores on norm-referenced tests are only rarely interpreted directly, standard errors in derived score units are more helpful to the typical test user. A confidence interval for an examinee's true score, universe score, or percentile rank serves much the same purpose as a standard error and can be used as an alternative approach to convey reliability information. The implications of the standard error of measurement are especially important in situations where decisions cannot be postponed and corroborative sources of information are limited.

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When test interpretation emphasizes differences between two observed scores of an individual or two averages of a group, reliability data, including standard errors, should be provided for such differences.

Comment: Observed score differences are used for a variety of purposes. Achievement gains are frequently the subject of inferences for groups as well as individuals. Differences between verbal and performance scores of intelligence and scholastic ability tests are often employed in the diagnosis of cognitive impairment and learning problems. Psychodiagnostic inferences are frequently drawn from the differences between subtest scores. Aptitude and achievement batteries, interest inventories, and personality assessments are commonly used to identify and quantify the relative strengths and weaknesses or the pattern of trait levels of an examinee. When the interpretation of test scores centers on the peaks and valleys in the examinee's test score profile, the reliability of score differences for all pairs of scores is critical.

Standard 2.4

Each method of quantifying the precision or consistency of scores should be described clearly and expressed in terms of statistics appropriate to the method. The sampling procedures used to select examinees for reliability analyses and descriptive statistics on these samples should be reported.

Comment: Information on the method of subject selection, sample sizes, means, standard deviations, and demographic characteristics of the groups helps users judge the extent to which reported data apply to their own examinee populations. If the test-retest or alternate-form approach is used, the interval between testings should be indicated. Because there are many ways of estimating reliability,

each influenced by different sources of measurement error, it is unacceptable to say simply, "The reliability of test X is .90." A better statement would be, "The reliability coefficient of .90 reported for scores on test X was obtained by correlating scores from forms A and B administered on successive days. The data were based on a sample of 400 10th-grade students from five middle-class suburban schools in New York State. The demographic breakdown of this group was as follows:"

Standard 2.5

A reliability coefficient or standard error of measurement based on one approach should not be interpreted as interchangeable with another derived by a different technique unless their implicit definitions of measurement error are equivalent.

Comment: Internal consistency, alternate-form, test-retest, and generalizability coefficients should not be considered equivalent, as each may incorporate a unique definition of measurement error. Error variances derived via item response theory may not be equivalent to error variances estimated via other approaches. Test developers should indicate the sources of error that are reflected in or ignored by the reported reliability indices.

Standard 2.6

If reliability coefficients are adjusted for restriction of range or variability, the adjustment procedure and both the adjusted and unadjusted coefficients should be reported. The standard deviations of the group actually tested and of the target population, as well as the rationale for the adjustment, should be presented.

Comment: Application of a correction for restriction in variability presumes that the available sample is not representative of the test-taker population to which users might be expected to generalize. The rationale for the

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correction should consider the appropriateness of such a generalization. Adjustment formulas that presume constancy in the standard error across score levels should not be used unless constancy can be defended.

Standard 2.7

When subsets of items within a test are dictated by the test specifications and can be presumed to measure partially independent traits or abilities, reliability estimation procedures should recognize the multifactor character of the instrument.

Comment: The total score on a test that is clearly multifactor in nature should be treated as a composite score. If an internal consistency estimate of total score reliability is obtained by the split-halves procedure, the halves should be parallel in content and statistical characteristics. Stratified coefficient alpha should be used rather than the more familiar nonstratified coefficient.

Standard 2.8

Test users should be informed about the degree to which rate of work may affect examinee performance.

Comment: It is not possible to state, in general, whether reliability coefficients will increase or decrease when rate of work becomes an important source of systematic variance. Rate of work, as an examinee trait, may be more stable or less stable from occasion to occasion than the other factors the test is designed to measure. Because speededness has differential effects on various estimates, information on speededness is helpful in interpreting reported coefficients.

The importance of the speed factor can sometimes be inferred from analyses of item responses and from observations by examiners during test administrations conducted for reliability analyses. The distribution of "last item attempted" and increases in the frequen-

cy of omitted responses toward the end of a test are also highly informative, though not conclusive, evidence regarding speededness. A decline in the proportion of correct responses, beyond that attributable to increasing item difficulty, may indicate that some examinees were responding randomly. With computer-administered tests, abnormally fast item response times, particularly toward the end of the test, may also suggest that examinees were responding randomly. In the case of constructed-response exercises, including essay questions, the completeness of the responses may suggest that time constraints had little effect on early items but a significant effect on later items. Introduction of a speed factor into what might otherwise be a power test may have a marked effect on alternate-form and test-retest reliabilities. A shift from a paper-and-pencil format to a computer-administered format may affect test speededness.

Standard 2.9

When a test is designed to reflect rate of work, reliability should be estimated by the alternate-form or test-retest approach, using separately timed administrations.

Comment: Split-half coefficients based on separate scores from the odd-numbered and even-numbered items are known to yield inflated estimates of reliability for highly speeded tests. Coefficient alpha and other internal consistency coefficients may also be biased, though the size of the bias is not as clear as that for the split-halves coefficient.

Standard 2.10

When subjective judgment enters into test scoring, evidence should be provided on both inter-rater consistency in scoring and within-examinee consistency over repeated measurements. A clear distinction should be made among reliability data based on (a) independent panels of raters scoring the same perform-

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ances or products, (b) a single panel scoring successive performances or new products, and (c) independent panels scoring successive performances or new products.

Comment: Task-to-task variations in the quality of an examinee's performance and rater-to-rater inconsistencies in scoring represent independent sources of measurement error. Reports of reliability studies should make clear which of these sources are reflected in the data. Where feasible, the error variances arising from each source should be estimated. Generalizability studies and variance component analyses are especially helpful in this regard. These analyses can provide separate error variance estimates for tasks within examinees, for judges, and for occasions within the time period of trait stability. Information should be provided on the qualifications of the judges used in reliability studies.

Inter-rater or inter-observer agreement may be particularly important for ratings and observational data that involve subtle discriminations. It should be noted, however, that when raters evaluate positively correlated characteristics, a favorable or unfavorable assessment of one trait may color their opinions of other traits. Moreover, high inter-rater consistency does not imply high examinee consistency from task to task. Therefore, internal consistency within raters and inter-rater agreement do not guarantee high reliability of examinee scores.

Standard 2.11

If there are generally accepted theoretical or empirical reasons for expecting that reliability coefficients, standard errors of measurement, or test information functions will differ substantially for various subpopulations, publishers should provide reliability data as soon as feasible for each major population for which the test is recommended.

Comment: If test score interpretation involves inferences within subpopulations as well as within the general population, reliability data should be provided for both the subpopulations and the general population. Test users who work exclusively with a specific cultural group or with individuals who have a particular disability would benefit from an estimate of the standard error for such a subpopulation. Some groups of test takers—pre-school children, for example—tend to respond to test stimuli in a less consistent fashion than do older children.

Standard 2.12

If a test is proposed for use in several grades or over a range of chronological age groups and if separate norms are provided for each grade or each age group, reliability data should be provided for each age or grade population, not solely for all grades or ages combined.

Comment: A reliability coefficient based on a sample of examinees spanning several grades or a broad range of ages in which average scores are steadily increasing will generally give a spuriously inflated impression of reliability. When a test is intended to discriminate within age or grade populations, reliability coefficients and standard errors should be reported separately for each population.

Standard 2.13

If local scorers are employed to apply general scoring rules and principles specified by the test developer, local reliability data should be gathered and reported by local authorities when adequate size samples are available.

Comment: For example, many statewide testing programs depend on local scoring of essays, constructed-response exercises, and performance tests. Reliability analyses bear on the possibility that additional training of scorers is needed and, hence, should be an integral part of program monitoring.

Standard 2.14

Conditional standard errors of measurement should be reported at several score levels if constancy cannot be assumed. Where cut scores are specified for selection or classification, the standard errors of measurement should be reported in the vicinity of each cut score.

Comment: Estimation of conditional standard errors is usually feasible even with the sample sizes that are typically used for reliability analyses. If it is assumed that the standard error is constant over a broad range of score levels, the rationale for this assumption should be presented.

Standard 2.15

When a test or combination of measures is used to make categorical decisions, estimates should be provided of the percentage of examinees who would be classified in the same way on two applications of the procedure, using the same form or alternate forms of the instrument.

Comment: When a test or composite is used to make categorical decisions, such as pass/fail, the standard error of measurement at or near the cut score has important implications for the trustworthiness of these decisions. However, the standard error cannot be translated into the expected percentage of consistent decisions unless assumptions are made about the form of the distributions of measurement errors and true scores. It is preferable that this percentage be estimated directly through the use of a repeated-measurements approach if consistent with the requirements of test security and if adequate samples are available.

Standard 2.16

In some testing situations, the items vary from examinee to examinee—through random selection from an extensive item pool or application

of algorithms based on the examinee's level of performance on previous items or preferences with respect to item difficulty. In this type of testing, the preferred approach to reliability estimation is one based on successive administrations of the test under conditions similar to those prevailing in operational test use.

Comment: Varying the set of items presented to each examinee is an acceptable procedure in some settings. If this approach is used, reliability data should be appropriate to this procedure. Estimates of standard errors of ability scores can be computed through the use of IRT and reported routinely as part of the adaptive testing procedure. However, those estimates are not an adequate substitute for estimates based on successive administrations of the adaptive test, nor do they bear on the issue of stability over short intervals. IRT estimates are contingent on the adequacy of both the item parameter estimates and the item response models adopted in the theory. Estimates of reliabilities and standard errors of measurement based on the administration and analysis of alternate forms of an adaptive test reflect errors associated with the entire measurement process. The alternate-form estimates provide an independent check on the magnitude of the errors of measurement specific to the adaptive feature of the testing procedure.

Standard 2.17

When a test is available in both long and short versions, reliability data should be reported for scores on each version, preferably based on an independent administration of each.

Comment: Some tests and test batteries are published in both a "full-length" version and a "survey" or "short" version. In many applications the Spearman-Brown formula will satisfactorily approximate the reliability of one of these from data based on the other. However, context effects are commonplace in tests of

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maximum performance. Also, the short version of a standardized test often comprises a nonrandom sample of items from the full-length version. Therefore, the shorter version may be more reliable or less reliable than the Spearman-Brown projections from the full-length version. The reliability of scores on each version is best evaluated through an independent administration of each, using the designated time limits.

Standard 2.18

When significant variations are permitted in test administration procedures, separate reliability analyses should be provided for scores produced under each major variation if adequate sample sizes are available.

Comment: To accommodate examinees with disabilities, test publishers might authorize modifications in the procedures and time limits that are specified for the administration of the paper-and-pencil edition of a test. In some cases, modified editions of the test itself may be provided. For example, tape-recorded versions for use in a group setting or with individual equipment may be used to test examinees who exhibit reading disabilities or attention deficits. If such modifications can be employed with test takers who are not disabled, insights can be gained regarding the possible effects on test scores of these non-standard administrations.

Standard 2.19

When average test scores for groups are used in program evaluations, the groups tested should generally be regarded as a sample from a larger population, even if all examinees available at the time of measurement are tested. In such cases the standard error of the group mean should be reported, as it reflects variability due to sampling of examinees as well as variability due to measurement error.

Comment: The graduating seniors of a liberal arts college, the current clients of a social service agency, and analogous groups exposed to a program of interest typically constitute a sample in a longitudinal sense. Presumably, comparable groups from the same population will recur in future years, given static conditions. The factors leading to uncertainty in conclusions about program effectiveness arise from the sampling of persons as well as measurement error. Therefore, the standard error of the mean observed score, reflecting variation in both true scores and measurement errors, represents a more realistic standard error in this setting. Even this value may underestimate the variability of group means over time. In many settings, the static conditions assumed under random sampling of persons do not prevail.

Standard 2.20

When the purpose of testing is to measure the performance of groups rather than individuals, a procedure frequently used is to assign a small subset of items to each of many subsamples of examinees. Data are aggregated across subsamples and item subsets to obtain a measure of group performance. When such procedures are used for program evaluation or population descriptions, reliability analyses must take the sampling scheme into account.

Comment: This type of measurement program is termed *matrix sampling*. It is designed to reduce the time demanded of individual examinees and to increase the total number of items on which data are obtained. This testing approach provides the same type of information about group performances that would accrue if all examinees could respond to all exercises in the item pool. Reliability statistics must be appropriate to the sampling plan used with respect to examinees and items.

3. TEST DEVELOPMENT AND REVISION

Background

Test development is the process of producing a measure of some aspect of an individual's knowledge, skill, ability, interests, attitudes, or other characteristics by developing items and combining them to form a test, according to a specified plan. Test development is guided by the stated purpose(s) of the test and the intended inferences to be made from the test scores. The test development process involves consideration of content, format, the context in which the test will be used, and the potential consequences of using the test. Test development also includes specifying conditions for administering the test, determining procedures for scoring the test performance, and reporting the scores to test takers and test users. This chapter focuses primarily on the following aspects of test development: stating the purpose(s) of the test, defining a framework for the test, developing test specifications, developing and evaluating items and their associated scoring procedures, assembling the test, and revising the test. The first section describes the test development process that begins with a statement of the purpose(s) of the test and culminates with the assembly of the test. The second section addresses several special considerations in test development, including considerations in delineating the test framework and in developing performance assessments. The chapter concludes with a discussion on test revision. Issues bearing on validity, reliability, and fairness are interwoven within the stages of test development. Each of these topics is addressed comprehensively in other chapters of the *Standards*: validity in chapter 1, reliability in chapter 2, and aspects of fairness in chapters 7, 8, 9, and 10. Additional material on test administration and scoring, and on reporting scores and results, is provided in chapter 5. Chapter 4 discusses score scales, and the focus of chapter 6 is test documents.

Test Development

The process of developing educational and psychological tests commonly begins with a statement of the purpose(s) of the test and the construct or content domain to be measured. Tests of the same construct or domain can differ in important ways, because a number of decisions must be made as the test is developed. It is helpful to consider the four phases leading from the original statement of purpose(s) to the final product: (a) delineation of the purpose(s) of the test and the scope of the construct or the extent of the domain to be measured; (b) development and evaluation of the test specifications; (c) development, field testing, evaluation, and selection of the items and scoring guides and procedures; and (d) assembly and evaluation of the test for operational use. What follows is a description of typical test development procedures, though there may be sound reasons that some of these steps are followed in some settings and not in others.

The first step is to extend the original statement of purpose(s), and the construct or content domain being considered, into a framework for the test that describes the extent of the domain, or the scope of the construct to be measured. The test framework, therefore, delineates the aspects (e.g., content, skills, processes, and diagnostic features) of the construct or domain to be measured. For example, "Does eighth-grade mathematics include algebra?" "Does verbal ability include text comprehension as well as vocabulary?" "Does self-esteem include both feelings and acts?" The delineation of the test framework can be guided by theory or an analysis of the content domain or job requirements as in the case of many licensing and employment tests. The test framework serves as a guide to subsequent test evaluation. The chapter on validity provides a more thorough discussion of the relationships among the construct or content domain, the test framework, and the purpose(s) of the test.

Once decisions have been made about what the test is to measure, and what its scores are intended to convey, the next step is to design the test by establishing test specifications. The test specifications delineate the format of items, tasks, or questions; the response format or conditions for responding; and the type of scoring procedures. The specifications may indicate the desired psychometric properties of items, such as difficulty and discrimination, as well as the desired test properties such as test difficulty, inter-item correlations, and reliability. The test specifications may also include such factors as time restrictions, characteristics of the intended population of test takers, and procedures for administration. All subsequent test development activities are guided by the test specifications.

Test specifications will include, at least implicitly, an indication of whether the test scores will be primarily norm-referenced or criterion-referenced. When scores are norm-referenced, relative score interpretations are of primary interest. A score for an individual or for a definable group is ranked within one or more distributions of scores or compared to the average performance of test takers for various reference populations (e.g., based on age, grade, diagnostic category, or job classification). When scores are criterion-referenced, absolute score interpretations are of primary interest. The meaning of such scores does not depend on rank information. Rather, the test score conveys directly a level of competence in some defined criterion domain. Both relative and absolute interpretations are often used with a given test, but the test developer determines which approach is most relevant for that test.

The nature of the item and response formats that may be specified depends on the purposes of the test and the defined domain of the test. Selected-response formats, such as multiple-choice items, are suitable for many purposes of testing. The test specifications indicate how many alternatives are to be used

for each item. Other purposes may be more effectively served by a short constructed-response format. Short-answer items require a response of no more than a few words. Extended-response formats require the test taker to write a more extensive response of one or more sentences or paragraphs. Performance assessments often seek to emulate the context or conditions in which the intended knowledge or skills are actually applied. One type of performance assessment, for example, is the standardized job or work sample. A task is presented to the test taker in a standardized format under standardized conditions. Job or work samples might include, for example, the assessment of a practitioner's ability to make an accurate diagnosis and recommend treatment for a defined condition, a manager's ability to articulate goals for an organization, or a student's proficiency in performing a science laboratory experiment.

All types of items require some indication of how to score the responses. For selected-response items, one alternative is considered the correct response in some testing programs. In other testing programs, the alternatives may be weighted differentially. For short-answer items, a list of acceptable alternatives may suffice; extended-response items need more detailed rules for scoring, sometimes called *scoring rubrics*. Scoring rubrics specify the criteria for evaluating performance and may vary in the degree of judgment entailed, in the number of score levels, and in other ways. It is common practice for test developers to provide scorers with examples of performances at each of the score levels to help clarify the criteria.

For extended-response items, including performance tasks, two major types of scoring procedures are used: analytic and holistic. Both of the procedures require explicit performance criteria that reflect the test framework. However, the approaches differ in the degree of detail provided in the evaluation report. Under the analytic scoring procedure, each critical dimension of the performance criteria is judged independently, and separate scores are obtained

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for each of these dimensions in addition to an overall score. Under the holistic scoring procedure, the same performance criteria may implicitly be considered, but only one overall score is provided. Because the analytic procedure provides information on a number of critical dimensions, it potentially provides valuable information for diagnostic purposes and lends itself to evaluating strengths and weaknesses of test takers. In contrast, the holistic procedure may be preferable when an overall judgment is desired and when the skills being assessed are complex and highly interrelated. Regardless of the type of scoring procedure, designing the items and developing the scoring rubrics and procedures is an integrated process.

A participatory approach may be used in the design of items, scoring rubrics, and sometimes the scoring process itself. Many interested persons (e.g., practitioners, teachers) may be involved in developing items and scoring rubrics, and/or evaluating the subsequent performances. If a participatory approach is used, participants' knowledge about the domain being assessed and their ability to apply the scoring rubrics are of critical importance. Equally important, for those involved in developing tests and evaluating performances, is their familiarity with the nature of the population being tested. Relevant characteristics of the population being tested may include the typical range of expected skill levels, their familiarity with the response modes required of them, and the primary language they use.

The test developer usually assembles an item pool that consists of a larger set of items than what is required by the test specifications. This allows for the test developer to select a set of items for the test that meet the test specifications. The quality of the items is usually ascertained through item review procedures and pilot testing. Items are reviewed for content quality, clarity and lack of ambiguity. Items sometimes are reviewed for sensitivity to gender or cultural issues. An attempt is generally made to avoid words and topics

that may offend or otherwise disturb some test takers, if less offensive material is equally useful. Often, a field test is developed and administered to a group of test takers who are somewhat representative of the target population for the test. The field test helps determine some of the psychometric properties of the test items, such as an item's difficulty and ability to discriminate among test takers of different standing on the scale. Ongoing testing programs often pretest items by inserting them into existing tests. Those items are not used in obtaining test scores of the test takers, but the item responses provide useful data for test development.

The next step in test development is to assemble items into a test or to identify an item pool for an adaptive test. The test developer is responsible for ensuring that the items selected for the test meet the requirements of the test specifications. Depending upon the purpose(s) of the test, relevant considerations in item selection may include the content quality and scope, the weighting of items and subdomains, and the appropriateness of the items selected for the intended population of test takers. Often test developers will specify the distribution of psychometric indices of the items to be included in the test. For example, the specified distribution of item difficulty indices for a selection test would differ from the distribution specified for a general achievement test. When psychometric indices of the items are estimated using item response theory (IRT), the fit of the model to the data is also evaluated. This is accomplished by evaluating the extent to which the assumptions underlying the item response model (e.g., unidimensionality, local independence, speededness, and equality of slope parameters) are satisfied.

The test developer is also responsible for ensuring that the scoring procedures are consistent with the purpose(s) of the test and facilitate meaningful score interpretation. The nature of the intended score interpretations

will determine the importance of psychometric characteristics of items in the test construction process. For example, indices of item difficulty and discrimination, and inter-item correlations, may be particularly important when relative score interpretations are intended. In the case of relative score interpretations, good discrimination among test takers at all points along the construct continuum is desirable. It is important, however, that the test specifications are not compromised when optimizing the distribution of these indices. In the case of absolute score interpretations, different criteria apply. In this case, the extent to which the relevant domain has been adequately represented is important even if many of the items are relatively easy or nondiscriminating within a relevant population. It is important, however, to assure the quality of the content of relatively easy or nondiscriminating items. If cut scores are necessary for score interpretation in criterion-referenced programs, the level of item discrimination constitutes critical information primarily in the vicinity of the cut scores. Because of these differences in test development procedures, tests designed to facilitate one type of interpretation function less effectively for other types of interpretation. Given appropriate test design and supporting evidence, however, scores arising from some norm-referenced programs may provide reasonable absolute score interpretations and scores arising from some criterion-referenced programs may provide reasonable relative score interpretations.

When evaluating the quality of the items in the item pool and the test itself, test developers often conduct studies of differential item functioning (see chapter 7). Differential item functioning is said to exist when test takers of approximately equal ability on the targeted construct or content domain differ in their responses to an item according to their group membership. In theory, the ultimate goal of such studies is to identify construct-irrelevant aspects of item content, item format,

or scoring criteria that may differentially affect test scores of one or more groups of test takers. When differential item functioning is detected, test developers try to identify plausible explanations for the differences, and then they may replace or revise items that give rise to group differences if construct irrelevance is deemed likely. However, at this time, there has been little progress in discerning the cause or substantive themes that account for differential item functioning on a group basis. Items for which the differential item functioning index is significant may constitute valid measures of an element of the intended domain and differ in no way from other items that show nonsignificant indexes. When the differential item functioning index is significant, the test developer must take care that any replacement items or item revisions do not compromise the test specifications.

When multiple forms of a test are prepared, the test specifications govern each of the forms. Also, when an item pool is developed for a computerized adaptive test, the specifications refer both to the item pool and to the rules or procedures by which the individual item sets are created for each test taker. Some of the attractive features of computerized adaptive tests, such as tailoring the difficulty level of the items to the test taker's ability, place additional constraints on the design of such tests. In general, a large number of items is needed for a computerized adaptive test to ensure that each tailored item set meets the requirements of the test specifications. Further, tests often are developed in the context of larger systems or programs. Multiple item sets, for example, may be created for use with different groups of test takers or on different testing dates. Last, when a short form of a test is prepared, the test specifications of the original test govern the short form. Differences in the test specifications and the psychometric properties of the short form and the original test will affect the interpretation of the scores derived from the short

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form. In any of these cases, the same fundamental methods and principles of test development apply.

Special Considerations in Test Development

This section elaborates on several topics discussed above. First, considerations in delineating the framework for the test are discussed. Following this, considerations in the development of performance assessments and portfolios are addressed.

Delineating the Framework for the Test

The scenario presented above outlines what is often done to develop a test. However, the activities do not always happen in a rigid sequence. There is often a subtle interplay between the process of conceptualizing a construct or content domain and the development of a test of that construct or domain. The framework for the test provides a description of how the construct or domain will be represented. The procedures used to develop items and scoring rubrics and to examine item characteristics may often contribute to clarifying the framework. The extent to which the framework is defined a priori is dependent on the testing application. In many testing applications, a well-defined framework and detailed test specifications guide the development of items and their associated scoring rubrics and procedures. In some areas of psychological measurement, test development may be less dependent on an a priori defined framework and may rely more on a data-based approach that results in an empirically derived definition of the framework. In such instances, items are selected primarily on the basis of their empirical relationship with an external criterion, their relationships with one another, or their power to discriminate among groups of individuals. For example, construction of a selection test for sales personnel might be guided by the corre-

lations of item scores with productivity measures of current sales personnel or a measure of client satisfaction might be assembled from those items in an item pool that correlate most highly with customer loyalty. Similarly, an inventory to help identify different patterns of psychopathology might be developed using patients from different diagnostic subgroups. When test development relies on a data-based approach, it is likely that some items will be selected based on chance occurrences in the data. Cross-validation studies are routinely conducted to determine the tendency to select items by chance, which involves administering the test to a comparable sample.

In many testing applications, the framework for the test is specified initially and this specification subsequently guides the development of items and scoring procedures. Empirical relationships may then be used to inform decisions about retaining, rejecting, or modifying items. Interpretations of scores from tests developed by this process have the advantage of a logical/theoretical and an empirical foundation for the underlying dimensions represented by the test.

PERFORMANCE ASSESSMENTS

One distinction between performance assessments and other forms of tests has to do with the type of response that is required from the test takers. Performance assessments require the test takers to carry out a process such as playing a musical instrument or tuning a car's engine or to produce a product such as a written essay. Performance assessments generally require the test takers to demonstrate their abilities or skills in settings that closely resemble real-life settings. For example, an assessment of a psychologist in training may require the test taker to interview a client, choose appropriate tests, and arrive at diagnosis and plan for therapy. Performance assessments are diverse in nature and can be product-based as well as behavior-based. Because performance assessments typically consist of a small num-

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ber of tasks, establishing the extent to which the results can be generalized to the broader domain is particularly important. The use of test specifications will contribute to tasks being developed so as to systematically represent the critical dimensions to be assessed, leading to a more comprehensive coverage of the domain than what would occur if test specifications were not used. Further, both logical and empirical evidence are important to document the extent to which performance assessments—tasks as well as scoring criteria—reflect the processes or skills that are specified by the domain definition. When tasks are designed to elicit complex cognitive processes, logical analyses of the tasks and both logical and empirical analyses of the test takers' performances on the tasks provide necessary validity evidence.

PORTFOLIOS

A unique type of performance assessment is an individual portfolio. Portfolios are systematic collections of work or educational products typically collected over time. Like other assessment procedures, the design of portfolios is dependent on the purpose. Typical purposes include judgment of the improvement in job or educational performance and evaluation of the eligibility for employment, promotion, or graduation. A well-designed portfolio specifies the nature of the work that is to be put into the portfolio. The portfolio may include entries such as representative products, the best work of the test taker, or indicators of progress. For example, in an employment setting involving promotion, employees may be instructed to include their best work or products. Alternatively, if the purpose is to judge a student's educational growth, students may be asked to provide evidence of improvement with respect to particular competencies or skills. They may also be requested to provide justifications for the choices. Still other methods may include the use of videotapes, exhibitions, demonstrations, simulations, and so on.

In employment settings, employees may be involved in the selection of their work and prod-

ucts that demonstrate their competencies for promotion purposes. Analogously, in educational applications, students may participate in the selection of some of their work and the products to be included in their portfolios as well as in the evaluation of the materials. The specifications for the portfolio indicate who is responsible for selecting its contents. For example, the specifications may state that the test taker, the examiner, or both parties working together should be involved in the selection of the contents of the portfolio. The particular responsibilities of each party are delineated in the specifications. The more standardized the contents and procedures of administration, the easier it is to establish comparability of portfolio-based scores. Regardless of the methods used, all performance assessments are evaluated by the same standards of technical quality as other forms of tests.

Test Revisions

Tests and their supporting documents (e.g., test manuals, technical manuals, user's guides) are reviewed periodically to determine whether revisions are needed. Revisions or amendments are necessary when new research data, significant changes in the domain, or new conditions of test use and interpretation would either improve the validity of interpretations of the test scores or suggest that the test is no longer fully appropriate for its intended use. As an example, tests are revised if the test content or language has become outdated and, therefore, may subsequently affect the validity of the test score interpretations. Revisions to test content are also made to ensure the confidentiality of the test. It should be noted, however, that outdated norms may not have the same implications for revisions as an outdated test. For example, it may be necessary to update the norms for an achievement test after a period of rising or falling achievement in the norming population, or when there are changes in the test-taking population, but the test content itself may continue to be as relevant as it was when the test was developed.

Standard 3.1

Tests and testing programs should be developed on a sound scientific basis. Test developers and publishers should compile and document adequate evidence bearing on test development.

Standard 3.2

The purpose(s) of the test, definition of the domain, and the test specifications should be stated clearly so that judgments can be made about the appropriateness of the defined domain for the stated purpose(s) of the test and about the relation of items to the dimensions of the domain they are intended to represent.

Comment: The adequacy and usefulness of test interpretations depend on the rigor with which the purposes of the test and the domain represented by the test have been defined and explicated. The domain definition should be sufficiently detailed and delimited to show clearly what dimensions of knowledge, skill, processes, attitude, values, emotions, or behavior are included and what dimensions are excluded. A clear description will enhance accurate judgments by reviewers and others about the congruence of the defined domain and the test items.

Standard 3.3

The test specifications should be documented, along with their rationale and the process by which they were developed. The test specifications should define the content of the test, the proposed number of items, the item formats, the desired psychometric properties of the items, and the item and section arrangement. They should also specify the amount of time for testing, directions to the test takers, procedures to be used for test administration and scoring, and other relevant information.

Comment: Professional judgment plays a major role in developing the test specifications. The specific procedures used for developing the specifications depend on the purposes of the test. For example, in developing licensure and certification tests, practice analyses or job analyses usually provide the basis for defining the test specifications, and job analyses primarily serve this function for employment tests. For achievement tests to be given at the end of a course, the test specifications should be based on an outline of course content and goals. Whereas, for placement tests, it may be necessary to examine the required entry knowledge and skills for several courses.

Standard 3.4

The procedures used to interpret test scores, and, when appropriate, the normative or standardization samples or the criterion used should be documented.

Comment: Test specifications may indicate that the intended score interpretations are for absolute or relative score interpretations, or both. In relative score interpretations the status of an individual (or group) is determined by comparing the score (or mean score) to the performance of others in one or more defined populations. In absolute score interpretations, the score or average is assumed to reflect directly a level of competence or mastery in some defined criterion domain. Tests designed to facilitate one type of interpretation function less effectively for other types of interpretations. Given appropriate test design and adequate supporting data, however, scores arising from norm-referenced testing programs may provide reasonable absolute score interpretations and scores arising from criterion-referenced programs may provide reasonable relative score interpretations.

Standard 3.5

When appropriate, relevant experts external to the testing program should review the test specifications. The purpose of the review, the

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process by which the review is conducted, and the results of the review should be documented. The qualifications, relevant experiences, and demographic characteristics of expert judges should also be documented.

Comment: Expert review of the test specifications may serve many useful purposes such as helping to assure content quality and representativeness. The expert judges may include individuals representing defined populations of concern to the test specifications. For example, if the test is related to ethnic minority concerns, the expert review typically includes members of appropriate ethnic minority groups or experts on minority group issues.

Standard 3.6

The type of items, the response formats, scoring procedures, and test administration procedures should be selected based on the purposes of the test, the domain to be measured, and the intended test takers. To the extent possible, test content should be chosen to ensure that intended inferences from test scores are equally valid for members of different groups of test takers. The test review process should include empirical analyses and, when appropriate, the use of expert judges to review items and response formats. The qualifications, relevant experiences, and demographic characteristics of expert judges should also be documented.

Comment: Expert judges may be asked to identify material likely to be inappropriate, confusing, or offensive for groups in the test-taking population. For example, judges may be asked to identify whether lack of exposure to problem contexts in mathematics word problems may be of concern for some groups of students. Various groups of test takers can be defined by characteristics such as age, ethnicity, culture, gender, disability, or demographic region. There is limited evidence, however, that expert reviews alleviate problems with bias in testing (see chapter 7).

Standard 3.7

The procedures used to develop, review, and try out items, and to select items from the item pool should be documented. If the items were classified into different categories or subtests according to the test specifications, the procedures used for the classification and the appropriateness and accuracy of the classification should be documented.

Comment: Empirical evidence and/or expert judgment are used to classify items according to categories of the test specifications. For example, professional panels may be used for classifying the items or for determining the appropriateness of the developer's classification scheme. The panel and procedures used should be chosen with care as they will affect the accuracy of the classification.

Standard 3.8

When item tryouts or field tests are conducted, the procedures used to select the sample(s) of test takers for item tryouts and the resulting characteristics of the sample(s) should be documented. When appropriate, the sample(s) should be as representative as possible of the population(s) for which the test is intended.

Comment: Conditions which may differentially affect performance on the test items by the sample(s) as compared to the intended population(s) should be documented when appropriate. As an example, test takers may be less motivated when they know their scores will not have an impact on them.

Standard 3.9

When a test developer evaluates the psychometric properties of items, the classical or item response theory (IRT) model used for evaluating the psychometric properties of items should be documented. The sample used for estimating item properties should be de-

scribed and should be of adequate size and diversity for the procedure. The process by which items are selected and the data used for item selection, such as item difficulty, item discrimination, and/or item information, should also be documented. When IRT is used to estimate item parameters in test development, the item response model, estimation procedures, and evidence of model fit should be documented.

Comment: Although overall sample size is important, it is important also that there be an adequate number of cases in regions critical to the determination of the psychometric properties of items. If the test is to achieve greatest precision in a particular part of the score scale and this consideration affects item selection, the manner in which item statistics are used needs to be carefully described. When IRT is used as the basis of test development, it is important to document the adequacy of fit of the model to the data. This is accomplished by providing information about the extent to which IRT assumptions (e.g., unidimensionality, local item independence, or equality of slope parameters) are satisfied.

Test developers should show that any differences between the administration conditions of the field test and the final form do not affect item performance. Conditions that can affect item statistics include item position, time limits, length of test, mode of testing (e.g., paper-and-pencil versus computer-administered), and use of calculators or other tools. For example, in field testing items, those placed at the end of a test might obtain poorer item statistics than those inserted within the test.

Standard 3.10

Test developers should conduct cross-validation studies when items are selected primarily on the basis of empirical relationships rather than on the basis of content or theoretical considerations. The extent to which the different studies identify the same item set should be documented.

Comment: When data-based approaches to test development are used, items are selected primarily on the basis of their empirical relationships with an external criterion, their relationships with one another, or their power to discriminate among groups of individuals. Under these circumstances, it is likely that some items will be selected based on chance occurrences in the data used. Administering the test to a comparable sample of test takers or a hold-out sample provides a means by which the tendency to select items by chance can be determined.

Standard 3.11

Test developers should document the extent to which the content domain of a test represents the defined domain and test specifications.

Comment: Test developers should provide evidence of the extent to which the test items and scoring criteria represent the defined domain. This affords a basis to help determine whether performance on the test can be generalized to the domain that is being assessed. This is especially important for tests that contain a small number of items such as performance assessments. Such evidence may be provided by expert judges.

Standard 3.12

The rationale and supporting evidence for computerized adaptive tests should be documented. This documentation should include procedures used in selecting subsets of items for administration, in determining the starting point and termination conditions for the test, in scoring the test, and for controlling item exposure.

Comment: It is important to assure that documentation of the procedures does not compromise the security of the test items.

If a computerized adaptive test is intended to measure a number of different content subcategories, item selection procedures are to assure that the subcategories are adequately represented by the items presented to the test taker.

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When a test score is derived from the differential weighting of items, the test developer should document the rationale and process used to develop, review, and assign item weights. When the item weights are obtained based on empirical data, the sample used for obtaining item weights should be sufficiently large and representative of the population for which the test is intended. When the item weights are obtained based on expert judgment, the qualifications of the judges should be documented.

Comment: Changes in the population of test takers, along with other changes such as changes in instructions, training, or job requirements, may impact the original derived item weights, necessitating subsequent studies after an appropriate period of time.

Standard 3.14

The criteria used for scoring test takers' performance on extended-response items should be documented. This documentation is especially important for performance assessments, such as scorable portfolios and essays, where the criteria for scoring may not be obvious to the user.

Comment: The completeness and clarity of the test specifications, including the definition of the domain, are essential in developing the scoring criteria. The test developer needs to provide a clear description of how the test scores are intended to be interpreted to help ensure the appropriateness of the scoring procedures.

Standard 3.15

When using a standardized testing format to collect structured behavior samples, the domain, test design, test specifications, and materials should be documented as for any other test. Such documentation should include a clear definition of the behavior expected of the test takers, the nature of the expected responses, and any materials or directions that are necessary to carry out the testing.

Comment: In developing a prompt, the age, language, experience, and ability level of test takers should be considered, as should other possible unique sources of difficulty for groups in the population to be tested. Test directions that specify time allowances, nature of the responses expected, and rules regarding use of supplementary materials, such as notes, references, dictionaries, calculators, or manipulatives such as lab equipment, may be established via field testing.

Standard 3.16

If a short form of a test is prepared, for example, by reducing the number of items on the original test or organizing portions of a test into a separate form, the specifications of the short form should be as similar as possible to those of the original test. The procedures used for the reduction of items should be documented.

Comment: The extent to which the specifications of the short form differ from those of the original test, and the implications of such differences for interpreting the scores derived from the short form, should be documented.

Standard 3.17

When previous research indicates that irrelevant variance could confound the domain definition underlying the test, then to the extent feasible, the test developer should investigate sources of irrelevant variance. Where possible, such sources of irrelevant variance should be removed or reduced by the test developer.

Standard 3.18

For tests that have time limits, test development research should examine the degree to which scores include a speed component and evaluate the appropriateness of that component, given the domain the test is designed to measure.

Standard 3.19

The directions for test administration should be presented with sufficient clarity and empha-

sis so that it is possible for others to replicate adequately the administration conditions under which the data on reliability and validity, and, where appropriate, norms were obtained.

Comment: Because all people administering tests, including those in schools, industry, and clinics, need to follow test administration conditions carefully, it is essential that test administrators receive detailed instructions on test administration guidelines and procedures.

Standard 3.20

The instructions presented to test takers should contain sufficient detail so that test takers can respond to a task in the manner that the test developer intended. When appropriate, sample material, practice or sample questions, criteria for scoring, and a representative item identified with each major area in the test's classification or domain should be provided to the test takers prior to the administration of the test or included in the testing material as part of the standard administration instructions.

Comment: For example, in a personality inventory it may be intended that test takers give the first response that occurs to them. Such an expectation should be made clear in the inventory directions. As another example, in directions for interest or occupational inventories, it may be important to specify whether test takers are to mark the activities they would like ideally or whether they are to consider both their opportunity and their ability realistically.

The extent and nature of practice materials and directions depend on expected levels of knowledge among test takers. For example, in using a novel test format, it may be very important to provide the test taker a practice opportunity as part of the test administration. In some testing situations, it may be important for the instructions to address such matters as the effects that guessing and time limits have on test scores. If expansion or elaboration of the test instructions is permitted, the condi-

tions under which this may be done should be stated clearly in the form of general rules and by giving representative examples. If no expansion or elaboration is to be permitted, this should be stated explicitly. Publishers should include guidance for dealing with typical questions from test takers. Users should be instructed how to deal with questions that may arise during the testing period.

Standard 3.21

If the test developer indicates that the conditions of administration are permitted to vary from one test taker or group to another, permissible variation in conditions for administration should be identified, and a rationale for permitting the different conditions should be documented.

Comment: In deciding whether the conditions of administration can vary, the test developer needs to consider and study the potential effects of varying conditions of administration. If conditions of administration vary from the conditions studied by the test developer or from those used in the development of norms, the comparability of the test scores may be weakened and the applicability of the norms can be questioned.

Standard 3.22

Procedures for scoring and, if relevant, scoring criteria should be presented by the test developer in sufficient detail and clarity to maximize the accuracy of scoring. Instructions for using rating scales or for deriving scores obtained by coding, scaling, or classifying constructed responses should be clear. This is especially critical if tests can be scored locally.

Standard 3.23

The process for selecting, training, and qualifying scorers should be documented by the test developer. The training materials, such as the

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scoring rubrics and examples of test takers' responses that illustrate the levels on the score scale, and the procedures for training scorers should result in a degree of agreement among scorers that allows for the scores to be interpreted as originally intended by the test developer. Scorer reliability and potential drift over time in raters' scoring standards should be evaluated and reported by the person(s) responsible for conducting the training session.

Standard 3.24

When scoring is done locally and requires scorer judgment, the test user is responsible for providing adequate training and instruction to the scorers and for examining scorer agreement and accuracy. The test developer should document the expected level of scorer agreement and accuracy.

Comment: A common practice of test developers is to provide examples of training materials (e.g., scoring rubrics, test takers' responses at each score level) and procedures when scoring is done locally and requires scorer judgment.

Standard 3.25

A test should be amended or revised when new research data, significant changes in the domain represented, or newly recommended conditions of test use may lower the validity of test score interpretations. Although a test that remains useful need not be withdrawn or revised simply because of the passage of time, test developers and test publishers are responsible for monitoring changing conditions and for amending, revising, or withdrawing the test as indicated.

Comment: Test developers need to consider a number of factors that may warrant the revision of a test, including outdated test content and language. If an older version of a test is used when a newer version has been published or made available, test users are responsible for

providing evidence that the older version is as appropriate as the new version for that particular test use.

Standard 3.26

Tests should be labeled or advertised as "revised" only when they have been revised in significant ways. A phrase such as "with minor modification" should be used when the test has been modified in minor ways. The score scale should be adjusted to account for these modifications, and users should be informed of the adjustments made to the score scale.

Comment: It is the test developer's responsibility to determine whether revisions to a test would influence test score interpretations. If test score interpretations would be affected by the revisions, it would then be appropriate to label the test "revised." When tests are revised, the nature of the revisions and their implications on test score interpretations should be documented.

Standard 3.27

If a test or part of a test is intended for research use only and is not distributed for operational use, statements to this effect should be displayed prominently on all relevant test administration and interpretation materials that are provided to the test user.

Comment: This standard refers to tests that are intended for research use only and does not refer to standard test development functions that occur prior to the operational use of a test (e.g., field testing).

4. SCALES, NORMS, AND SCORE COMPARABILITY

Background

Test scores are reported on scales designed to assist score interpretation. Typically, scoring begins with responses to separate test items, which are often coded using 0 or 1 to represent wrong/right or negative/positive, but sometimes using numerical values to indicate finer response gradations. Then the item scores are combined, often by addition but sometimes by a more elaborate procedure, to obtain a *raw score*. Raw scores are determined, in part, by features of a test such as test length, choice of time limit, item difficulties, and the circumstances under which the test is administered. This makes raw scores difficult to interpret in the absence of further information. Interpretation and statistical analyses may be facilitated by converting raw scores into an entirely different set of values called *derived scores* or *scale scores*. The various scales used for reporting scores on college admissions tests, the standard scores often used to report results for intelligence scales or vocational interest and personality inventories, and the grade equivalents reported for achievement tests in the elementary grades are examples of scale scores. The process of developing such a score scale is called *scaling* a test. Scale scores may aid interpretation by indicating how a given score compares to those of other test takers, by enhancing the comparability of scores obtained using different forms of a test, or in other ways.

Another way of assisting score interpretation is to establish *standards* or *cut scores* that distinguish different score ranges. In some cases, a single cut score may define the boundary between passing and failing. In other cases, a series of cut scores may define distinct proficiency levels. Cut scores may be established for either raw or scale scores. Both scale scores and standards or cut scores can be central to the use and interpretation of test scores. For

that reason, their defensibility is an important consideration in test validation. There is a close connection between standards or cut scores and certain scale scores. If the successive score ranges defined by a series of cut scores are relabeled, say 0, 1, 2, and so on, then a scale score has been created.

In addition to facilitating interpretations of a single test form considered in isolation, scale scores are often created to enhance comparability across different forms of the same test, across test formats or administration conditions, or even across tests designed to measure different constructs (e.g., related subtests in a battery). Equated scores from alternate forms of a test can often be interpreted more easily when expressed in scale score units rather than raw score units. Scaling may be used to place scores from different levels of an achievement test on a continuous scale and thereby facilitate inferences about growth or development. Scaling can also enhance the comparability of scores derived from tests in different areas, as in subtests within an aptitude, interest, or achievement battery.

Norm-Referenced and Criterion-Referenced Score Interpretations

Individual raw scores or scale scores are often referred to the distribution of scores for one or more comparison groups to draw useful inferences about an individual's performance. Test score interpretations based on such comparisons are said to be *norm-referenced*. Percentile rank norms, for example, indicate the standing of an individual or group within a defined population of individuals or groups. An example of such a comparison group might be fourth-grade students in the United States, tested in the last 2 months of a recent school year. Percentiles, averages, or other statistics for such reference groups are called *norms*. By showing

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how the test score of a given examinee compares to those of others, norms assist in the classification or description of examinees.

Other test score interpretations make no direct reference to the performance of other examinees. These interpretations may take a variety of forms; most are collectively referred to as *criterion-referenced* interpretations. Derived scores supporting such interpretations may indicate the likely proportion of correct responses on some larger domain of items, or the probability of an examinee's answering particular sorts of items correctly. Other criterion-referenced interpretations may indicate the likelihood that some psychopathology is present. Still other criterion-referenced interpretations indicate the probability that an examinee's level of tested knowledge or skill is adequate to perform successfully in some other setting; such probabilities may be summarized in an expectancy table. Scale scores to support such criterion-referenced score interpretations are often developed on the basis of statistical analyses of the relationships of test scores to other variables.

Some scale scores are developed primarily to support norm-referenced interpretations and others, criterion-referenced interpretations. In practice, however, there is not always a sharp distinction. Both criterion-referenced and norm-referenced scales may be developed and used for the same test scores. Moreover, a norm-referenced score scale originally developed, for example, to indicate performance relative to some specific reference population might, over time, also come to support criterion-referenced interpretations. This could happen as research and experience brought increased understanding of the capabilities implied by different scale score levels. Conversely, results of an educational assessment might be reported on a scale consisting of several ordered proficiency levels, defined by descriptions of the kinds of tasks students at each level were able to perform. That would be a criterion-referenced scale, but once the

distribution of scores over levels was reported, say, for all eighth-grade students in a given state, individual students' scores would also convey information about their standing relative to that tested population.

Interpretations based on cut scores may likewise be either criterion-referenced or norm-referenced. If qualitatively different descriptions are attached to successive score ranges, a criterion-referenced interpretation is supported. For example, the descriptions of performance levels in some assessment task scoring rubrics can enhance score interpretation by summarizing the capabilities that must be demonstrated to merit a given score. In other cases, criterion-referenced interpretations may be based on empirically determined relationships between test scores and other variables. But when tests are used for selection, it may be appropriate to rank-order examinees according to their test performance and establish a cut score so as to select a prespecified number or proportion of examinees from one end of the distribution, if the selection use is otherwise supported by relevant reliability and validity evidence. In such cases, the cut score interpretation is norm-referenced; the labels *reject* or *fail* versus *accept* or *pass* are determined solely by an examinee's standing relative to others tested.

Criterion-referenced interpretations based on cut scores are sometimes criticized on the grounds that there is very rarely a sharp distinction of any kind between those just below versus just above a cut score. A neuropsychological test may be helpful in diagnosing some particular impairment, for example, but the probability that the impairment is present is likely to increase continuously as a function of the test score. Cut scores may nonetheless aid in formulating rules for reaching decisions on the basis of test performance. It should be recognized, however, that the probability of misclassification will generally be relatively high for persons with scores close to the cut points.

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Norms

The validity of norm-referenced interpretations depends in part on the appropriateness of the reference group to which test scores are compared. Norms based on hospitalized patients, for example, might be inappropriate for some interpretations of nonhospitalized patients' scores. Thus, it is important that reference populations be carefully defined and clearly described. Validity of such interpretations also depends on the accuracy with which norms summarize the performance of the reference population. That population may be small enough that essentially the entire population can be tested (e.g., all pupils at a given grade level in a given district tested on the same occasion). Often, however, only a sample of examinees from the reference population is tested. It is then important that the norms be based on a technically sound, representative, scientific sample of sufficient size. Patients in a few hospitals in a small geographic region are unlikely to be representative of all patients in the United States, for example. Moreover, the appropriateness of norms based on a given sample may diminish over time. Thus, for tests that have been in use for a number of years, periodic review is generally required to assure the continued utility of norms. Renorming may be required to maintain the validity of norm-referenced test score interpretations.

More than one reference population may be appropriate for the same test. For example, achievement test performance might be interpreted by reference to local norms based on sampling from a particular school district, norms for a state or type of community, or national norms. For other tests, norms might be based on occupational or educational classifications. Descriptive statistics for all examinees who happen to be tested during a given period of time (sometimes called *user norms* or *program norms*) may be useful for some purposes, such as describing trends over time. But there must be sound reason to regard that

group of test takers as an appropriate basis for such inferences. When there is a suitable rationale for using such a group, the descriptive statistics should be clearly characterized as being based on a sample of persons routinely tested as part of an ongoing program.

Comparability and Equating

Many test uses involve different versions of the same test, which yield scores that can be used interchangeably even though they are based on different sets of items. In testing programs that offer a choice of examination dates, for example, test security may be compromised if the same form is used repeatedly. Other testing applications may entail repeated measurements of the same individuals, perhaps to measure change in levels of psychological dysfunction, change in attitudes, or educational progress. In such contexts, reuse of the same set of test items may result in correlated errors of measurement and biased estimates of change. When distinct forms of a test are constructed to the same explicit content and statistical specifications and administered under identical conditions, they are referred to as *alternate forms* or sometimes *parallel* or *equivalent* forms. The process of placing scores from such alternate forms on a common scale is called *equating*. Equating is analogous to the calibration of different balances so that they all indicate the same weight for any given object. However, the equating process for test scores is more complex. It involves small statistical adjustments to account for minor differences in the difficulty and statistical properties of the alternate forms.

In theory, equating should provide accurate score conversions for any set of persons drawn from the examinee population for which the test is designed. Furthermore, the same score conversion should be appropriate regardless of the score interpretation or use intended. It is not possible to construct conversions with these ideal properties between scores on

tests that measure different constructs; that differ materially in difficulty, reliability, time limits, or other conditions of administration; or that are designed to different specifications.

There is another assessment approach that may provide interchangeable scores based on responses to different items using different methods, not referred to as equating. This is the use of *adaptive tests*. It has long been recognized that little is learned from examinees' responses to items that are much too easy or much too difficult for them. Consequently, some testing procedures use only a subset of the available items with each examinee in order to avoid boredom or frustration, or to shorten testing time. An adaptive test consists of a pool of items together with rules for selecting a subset of those items to be administered to an individual examinee, and a procedure for placing different examinees' scores on a common scale. The selection of successive items is based in part on the examinee's responses to previous items. The item pool and item selection rules may be designed so that each examinee receives a representative set of items, of appropriate difficulty. The selection rules generally assure that an acceptable degree of precision is attained before testing is terminated. At one time, such tailored testing was limited to certain individually administered psychological tests. With advances in item response theory (IRT) and in computer technology, however, adaptive testing is becoming more sophisticated. With some adaptive tests, it may happen that two examinees rarely if ever respond to precisely the same set of items. Moreover, two examinees taking the same adaptive test may be given sets of items that differ markedly in difficulty. Nevertheless, when certain statistical and content conditions are met, test scores produced by an adaptive testing system can function like scores from equated alternate forms.

Scaling to Achieve Comparability

The term *equating* is properly reserved only for score conversions derived for alternate forms of the same test. It is often useful, however, to compare scores from tests that cannot, in theory, be equated. For example, it may be desirable to interpret scores from a shortened (and hence less reliable) form of a test by first converting them to corresponding scores on the full-length version. For the evaluation of examinee growth over time, it may be desirable to develop scales that span a broad range of developmental or educational levels. Test revision often brings a need for some linkage between scores obtained using newer and older editions. International comparative studies or use with hearing-impaired examinees may require test forms in different languages. In still other cases, linkages or alignments may be created between tests measuring different constructs, perhaps comparing an aptitude with a form of behavior, or linking measures of achievement in several content areas. Scores from such tests may sometimes be aligned or presented in a concordance table to aid users in estimating relative performance on one test from performance on another.

Score conversions to facilitate such comparisons may be described using terms like linkage, calibration, concordance, projection, moderation, or anchoring. These weaker score linkages may be technically sound and may fully satisfy desired goals of comparability for one purpose or for one subgroup of examinees, but they cannot be assumed to be stable over time or invariant across multiple subgroups of the examinee population nor is there any assurance that scores obtained using different tests will be equally accurate. Thus, their use for other purposes or with other populations than originally intended may require additional research. For example, a score conversion that was accurate for a group of native speakers might systematically overpredict or underpredict the scores of a group of nonnative speakers.

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Cut Scores

A critical step in the development and use of some tests is to establish one or more cut points dividing the score range to partition the distribution of scores into categories. These categories may be used just for descriptive purposes or may be used to distinguish among examinees for whom different programs are deemed desirable or different predictions are warranted. An employer may determine a cut score to screen potential employees or promote current employees; a school may use test scores to decide which of several alternative instructional programs would be most beneficial for a student; in granting a professional license, a state may specify a minimum passing score on a licensure test.

These examples differ in important respects, but all involve delineating categories of examinees on the basis of test scores. Such cut scores embody the rules according to which tests are used or interpreted. Thus, in some situations the validity of test interpretations may hinge on the cut scores. There can be no single method for determining cut scores for all tests or for all purposes, nor can there be any single set of procedures for establishing their defensibility. These examples serve only as illustrations.

The first example, that of an employer hiring all those who earn scores above a given level on an employment test, is most straightforward. Assuming that the employment test is valid for its intended use, average job performance would typically be expected to rise steadily, albeit slowly, with each increment in test score, at least for some range of scores surrounding the cut point. In such a case the designation of the particular value for the cut point may be largely determined by the number of persons to be hired or promoted. There is no sharp difference between those just below the cut point and those just above it, and the use of the cut score does not entail any criterion-referenced interpretation. This method

of establishing a cut score may be subject to legal requirements with respect to the nature of the validity and reliability evidence needed to support the use of rank-order selections and the unavailability of effective alternative selection methods, if it has a disproportionate effect on one or more subgroups of employees or prospective employees.

In the second example, a school district might structure its courses in writing around three categories of needs. For children whose proficiency is least developed, instruction might be provided in small groups, with considerable individual attention to assist them in creating meaningful written stories grounded in their own experience. For children whose proficiency was further developed, more emphasis might be placed on systematic exploration of the stages of the writing process. Instruction for children at the highest proficiency level might emphasize mastery of specific writing genres or prose structures used in more formal writing. In an appropriate implementation of such a program, children could easily be transferred from one level to another if their original placement was in error or as their proficiency increased. Ideally, cut scores delineating categories in this application would be based on research demonstrating empirically that pupils in successive score ranges did most often benefit more from the respective treatments to which they were assigned than from the alternatives available. It would typically be found that between those score ranges in which one or another instructional treatment was clearly superior, there was an intermediate region in which neither treatment was clearly preferred. The cut score might be located somewhere in that intermediate region.

In the final example, that of a professional licensure examination, the cut score represents an informed judgment that those scoring below it are likely to make serious errors for want of the knowledge or skills tested. Little evidence apart from errors made on the test itself may document the need to deny the right to prac-

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tice the profession. No test is perfect, of course, and regardless of the cut score chosen, some examinees with inadequate skills are likely to pass and some with adequate skills are likely to fail. The relative probabilities of such false positive and false negative errors will vary depending on the cut score chosen. A given probability of exposing the public to potential harm by issuing a license to an incompetent individual (false positive) must be weighed against some corresponding probability of denying a license to, and thereby disenfranchising, a qualified examinee (false negative). Changing the cut score to reduce either probability will increase the other, although both kinds of errors can be minimized through sound test design that anticipates the role of the cut score in test use and interpretation. Determining cut scores in such situations cannot be a purely technical matter, although empirical studies and statistical models can be of great value in informing the process.

Cut scores embody value judgments as well as technical and empirical considerations. Where the results of the standard-setting process have highly significant consequences, and especially where large numbers of examinees are involved, those responsible for establishing cut scores should be concerned that the process by which cut scores are determined be clearly documented and defensible. The qualifications of any judges involved in standard setting and the process by which they are selected are part of that documentation. Care must be taken to assure that judges understand what they are to do. The process must be such that well-qualified judges can apply their knowledge and experience to reach meaningful and relevant judgments that accurately reflect their understandings and intentions. A sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were replicated.

Standard 4.1

Test documents should provide test users with clear explanations of the meaning and intended interpretation of derived score scales, as well as their limitations.

Comment: All scales (raw score or derived) may be subject to misinterpretation. Sometimes scales are extrapolated beyond the range of available data or are interpolated without sufficient data points. Grade- and age-equivalent scores have been criticized in this regard, but percentile ranks and standard score scales are also subject to misinterpretation. If the nature or intended uses of a scale are novel, it is especially important that its uses, interpretations, and limitations be clearly described. Illustrations of appropriate versus inappropriate interpretations may be helpful, especially for types of scales or interpretations that may be unfamiliar to most users. This standard pertains to score scales intended for criterion-referenced as well as for norm-referenced interpretation.

Standard 4.2

The construction of scales used for reporting scores should be described clearly in test documents.

Comment: When scales, norms, or other interpretive systems are provided by the test developer, technical documentation should enable users to judge the quality and precision of the resulting derived scores. This standard pertains to score scales intended for criterion-referenced as well as for norm-referenced interpretation.

Standard 4.3

If there is sound reason to believe that specific misinterpretations of a score scale are likely, test users should be explicitly forewarned.

Comment: Test publishers and users can reduce misinterpretations of grade-equivalent scores, for example, by ensuring that such scores are accompanied by instructions that make clear that grade-equivalent scores do not represent a standard of growth per year or grade and that roughly 50% of the students tested in the standardization sample should by definition fall below grade level. As another example, a score scale point originally defined as the mean of some reference population should no longer be interpreted as representing average performance if the scale is held constant over time and the examinee population changes.

Standard 4.4

When raw scores are intended to be directly interpretable, their meanings, intended interpretations, and limitations should be described and justified in the same manner as is done for derived score scales.

Comment: In some cases the items in a test are a representative sample of a well-defined domain of items. The proportion correct on the test may then be interpreted as an estimate of the proportion of items in the domain that could be answered correctly. In other cases, different interpretations may be attached to scores above or below one or another cut score. Support should be offered for any such interpretations recommended by the test developer.

Standard 4.5

Norms, if used, should refer to clearly described populations. These populations should include individuals or groups to whom test users will ordinarily wish to compare their own examinees.

Comment: It is the responsibility of test developers to describe norms clearly and the responsibility of test users to employ norms appropriately. Users need to know the applicability of a test to different groups. Differentiated norms or sum-

mary information about differences between gender, ethnic, language, disability, grade, or age groups, for example, may be useful in some cases. The permissible uses of such differentiated norms and related information may be limited by law. Users also need to be made alert to situations in which norms are less appropriate for some groups or individuals than others. On an occupational interest inventory, for example, norms for persons actually engaged in an occupation may be inappropriate for interpreting the scores of persons not so engaged. As another example, the appropriateness of norms for personality inventories or relationship scales may differ depending upon an examinee's sexual orientation.

Standard 4.6

Reports of norming studies should include precise specification of the population that was sampled, sampling procedures and participation rates, any weighting of the sample, the dates of testing, and descriptive statistics. The information provided should be sufficient to enable users to judge the appropriateness of the norms for interpreting the scores of local examinees. Technical documentation should indicate the precision of the norms themselves.

Comment: Scientific sampling is important if norms are to be representative of intended populations. For example, schools already using a given published test and volunteering to participate in a norming study for that test should not be assumed to be representative of schools in general. In addition to sampling procedures, participation rates should be reported, and the method of calculating participation rates should be clearly described. Studies that are designed to be nationally representative often use weights so that the weighted sample better represents the nation than does the unweighted sample. When weights are used, it is important that the procedure for deriving the weights be described and that the demographic representa-

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tion of both the weighted and the unweighted samples be given. If norming data are collected under conditions in which student motivation in completing the test is likely to differ from that expected during operational use, this should be clearly documented. Likewise, if the instructional histories of students in the norming sample differ systematically from those to be expected during operational test use, that fact should be noted. Norms based on samples cannot be perfectly precise. Even though the imprecision of norm-referenced interpretations due to imperfections in the norms themselves may be small compared to that due to measurement error, estimates of the precision of norms should be available in technical documentation. For example, standard errors based on the sample design might be presented. In some testing applications, norms based on all examinees tested over a given period of time may be useful for some purposes. Such norms should be clearly characterized as being based on a sample of persons routinely tested as part of an ongoing testing program.

Standard 4.7

If local examinee groups differ materially from the populations to which norms refer, a user who reports derived scores based on the published norms has the responsibility to describe such differences if they bear upon the interpretation of the reported scores.

Comment: In employment settings, the qualifications of local examinee groups may fluctuate depending on recruitment or referral procedures as well as market conditions. In such cases, appropriate test use and interpretation may not require documentation or cautions concerning departures from characteristics of the norming population.

Standard 4.8

When norms are used to characterize examinee groups, the statistics used to summarize

each group's performance and the norms to which those statistics are referred should be clearly defined and should support the intended use or interpretation.

Comment: Group means are distributed differently from individual scores. For example, it is not possible to determine the percentile rank of a school's average test score if all that is known are the percentile ranks of each of that school's students. It may sometimes be useful to develop special norms for group means, but when the sizes of the groups differ materially or when some groups are much more heterogeneous than others, the construction and interpretation of group norms is problematical. One common and acceptable procedure is to report the percentile rank of the median group member, for example, the median percentile rank of the pupils tested in a given school.

Standard 4.9

When raw score or derived score scales are designed for criterion-referenced interpretation, including the classification of examinees into separate categories, the rationale for recommended score interpretations should be clearly explained.

Comment: Criterion-referenced interpretations are score-based descriptions or inferences that do not take the form of comparisons to the test performance of other examinees. Examples include statements that some psychopathology is likely present, that a prospective employee possesses specific skills required in a given position, or that a child scoring above a certain score point can successfully apply a given set of skills. Such interpretations may refer to the absolute levels of test scores or to patterns of scores for an individual examinee. Whenever the test developer recommends such interpretations, the rationale and empirical basis should be clearly presented. Serious efforts should be made whenever possible to obtain independent

evidence concerning the soundness of such score interpretations. Criterion-referenced and norm-referenced scales are not mutually exclusive. Given adequate supporting data, scores may be interpreted by both approaches, not necessarily just one or the other.

Standard 4.10

A clear rationale and supporting evidence should be provided for any claim that scores earned on different forms of a test may be used interchangeably. In some cases, direct evidence of score equivalence may be provided. In other cases, evidence may come from a demonstration that the theoretical assumptions underlying procedures for establishing score comparability have been sufficiently satisfied. The specific rationale and the evidence required will depend in part on the intended uses for which score equivalence is claimed.

Comment: Support should be provided for any assertion that scores obtained using different items or testing materials, or different testing procedures, are interchangeable for some purpose. This standard applies, for example, to alternate forms of a paper-and-pencil test or to alternate sets of items taken by different examinees in computerized adaptive testing. It also applies to test forms administered in different formats (e.g., paper-and-pencil and computerized tests) or test forms designed for individual versus group administration. Score equivalence is easiest to establish when different forms are constructed following identical procedures and then equated statistically. When that is not possible, for example, in cases where different test formats are used, additional evidence may be required to establish the requisite degree of score equivalence for the intended context and purpose. When recommended inferences or actions are based solely on classifications of examinees into one of two or more categories, the rationale and evidence should address consistency of classification. If the only

score reported and used is a pass-fail decision, for example, then the form-to-form equivalence of measurements for examinees far above or far below the cut score is of no concern. Some testing accommodations may only affect the dependence of test scores on capabilities irrelevant to the construct the test is intended to measure. Use of a large-print edition, for example, assures that performance does not depend on the ability to perceive standard-size print. In such cases, relatively modest studies or professional judgment may be sufficient to support claims of score equivalence.

Standard 4.11

When claims of form-to-form score equivalence are based on equating procedures, detailed technical information should be provided on the method by which equating functions or other linkages were established and on the accuracy of equating functions.

Comment: The fundamental concern is to show that equated scores measure essentially the same construct, with very similar levels of reliability and conditional standard errors of measurement. Technical information should include the design of equating studies, the statistical methods used, the size and relevant characteristics of examinee samples used in equating studies, and the characteristics of any anchor tests or linking items. Standard errors of equating functions should be estimated and reported whenever possible. Sample sizes permitting, it may be informative to determine equating functions independently for identifiable subgroups of examinees. It may also be informative to use two anchor forms and to conduct the equating using each of the anchors. In some cases, equating functions may be determined independently using different statistical methods. The correspondence of separate functions obtained by such methods can lend support to the adequacy of the equating results. Any substantial disparities found by such methods

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should be resolved or reported. To be most useful, equating error should be presented in units of the reported score scale. For testing programs with cut scores, equating error near the cut score is of primary importance. The degree of scrutiny of equating functions should be commensurate with the extent of test use anticipated and the importance of the decisions the test scores are intended to inform.

Standard 4.12

In equating studies that rely on the statistical equivalence of examinee groups receiving different forms, methods of assuring such equivalence should be described in detail.

Comment: Certain equating designs rely on the random equivalence of groups receiving different forms. Often, one way to assure such equivalence is to systematically mix different test forms and then distribute them in a random fashion so that roughly equal numbers of examinees in each group tested receive each form.

Standard 4.13

In equating studies that employ an anchor test design, the characteristics of the anchor test and its similarity to the forms being equated should be presented, including both content specifications and empirically determined relationships among test scores. If anchor items are used, as in some IRT-based and classical equating studies, the representativeness and psychometric characteristics of anchor items should be presented.

Comment: Tests or test forms may be linked via common items embedded within each of them, or a common test administered together with each of them. These common items or tests are referred to as linking items, anchor items, or anchor tests. With such methods, the quality of the resulting equating depends strongly on the adequacy of the anchor tests or items used.

Standard 4.14

When score conversions or comparison procedures are used to relate scores on tests or test forms that are not closely parallel, the construction, intended interpretation, and limitations of those conversions or comparisons should be clearly described.

Comment: Various score conversions or concordance tables have been constructed relating tests at different levels of difficulty, relating earlier to revised forms of published tests, creating score concordances between different tests of similar or different constructs, or for other purposes. Such conversions are often useful, but they may also be subject to misinterpretation. The limitations of such conversions should be clearly described.

Standard 4.15

When additional test forms are created by taking a subset of the items in an existing test form or by rearranging its items and there is sound reason to believe that scores on these forms may be influenced by item context effects, evidence should be provided that there is no undue distortion of norms for the different versions or of score linkages between them.

Comment: Some tests and test batteries are published in both a full-length version and a survey or short version. In other cases, multiple versions of a single test form may be created by rearranging its items. It should not be assumed that performance data derived from the administration of items as part of the initial version can be used to approximate norms or construct conversion tables for alternative intact tests. Due caution is required in cases where context effects are likely, including speeded tests, long tests where fatigue may be a factor, and so on. In many cases, adequate psychometric data may only be obtainable from independent administrations of the alternate forms.

Standard 4.16

If test specifications are changed from one version of a test to a subsequent version, such changes should be identified in the test manual, and an indication should be given that converted scores for the two versions may not be strictly equivalent. When substantial changes in test specifications occur, either scores should be reported on a new scale or a clear statement should be provided to alert users that the scores are not directly comparable with those on earlier versions of the test.

Comment: Major shifts sometimes occur in the specifications of tests that are used for substantial periods of time. Often such changes take advantage of improvements in item types or of shifts in content that have been shown to improve validity and, therefore, are highly desirable. It is important to recognize, however, that such shifts will result in scores that cannot be made strictly interchangeable with scores on an earlier form of the test.

Standard 4.17

Testing programs that attempt to maintain a common scale over time should conduct periodic checks of the stability of the scale on which scores are reported.

Comment: In some testing programs, items are introduced into and retired from item pools on an ongoing basis. In other cases, the items in successive test forms may overlap very little, or not at all. In either case, if a fixed scale is used for reporting, it is important to assure that the meaning of the scaled scores does not change over time.

Standard 4.18

If a publisher provides norms for use in test score interpretation, then so long as the test remains in print, it is the publisher's responsibility to assure that the test is renormed with sufficient frequency to permit continued accurate and appropriate score interpretations.

Comment: Test publishers should assure that up-to-date norms are readily available, but it remains the test user's responsibility to avoid inappropriate use of norms that are out of date and to strive to assure accurate and appropriate test interpretations.

Standard 4.19

When proposed score interpretations involve one or more cut scores, the rationale and procedures used for establishing cut scores should be clearly documented.

Comment: Cut scores may be established to select a specified number of examinees (e.g., to fill existing vacancies), in which case little further documentation may be needed concerning the specific question of how the cut scores are established, though attention should be paid to legal requirements that may apply. In other cases, however, cut scores may be used to classify examinees into distinct categories (e.g., diagnostic categories, or passing versus failing) for which there are no preestablished quotas. In these cases, the standard-setting method must be clearly documented. Ideally, the role of cut scores in test use and interpretation is taken into account during test design. Adequate precision in regions of score scales where cut points are established is prerequisite to reliable classification of examinees into categories. If standard setting employs data on the score distributions for criterion groups or on the relation of test scores to one or more criterion variables, those data should be summarized in technical documentation. If a judgmental standard-setting process is followed, the method employed should be clearly described, and the precise nature of the judgments called for should be presented, whether those are judgments of persons, of item or test performances, or of other criterion performances predicted by test scores. Documentation should also include the selection and qualification of judges, training provided, any feedback to judges concerning the implications of their provisional judgments,

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and any opportunities for judges to confer with one another. Where applicable, variability over judges should be reported. Whenever feasible, an estimate should be provided of the amount of variation in cut scores that might be expected if the standard-setting procedure were replicated.

Standard 4.20

When feasible, cut scores defining categories with distinct substantive interpretations should be established on the basis of sound empirical data concerning the relation of test performance to relevant criteria.

Comment: In employment settings, although it is important to establish that test scores are related to job performance, the precise relation of test and criterion may have little bearing on the choice of a cut score. However, in contexts where distinct interpretations are applied to different score categories, the empirical relation of test to criterion assumes greater importance. Cut scores used in interpreting diagnostic tests may be established on the basis of empirically determined score distributions for criterion groups. With achievement or proficiency tests, such as those used in licensure, suitable criterion groups (e.g., successful versus unsuccessful practitioners) are often unavailable. Nonetheless, it is highly desirable, when appropriate and feasible, to investigate the relation between test scores and performance in relevant practical settings. Note that a carefully designed and implemented procedure based solely on judgments of content relevance and item difficulty may be preferable to an empirical study with an inadequate criterion measure or other deficiencies. Professional judgment is required to determine an appropriate standard-setting approach (or combination of approaches) in any given situation. In general, one would not expect to find a sharp difference in levels of the criterion variable between those just

below versus just above the cut score, but evidence should be provided where feasible of a relationship between test and criterion performance over a score interval that includes or approaches the cut score.

Standard 4.21

When cut scores defining pass-fail or proficiency categories are based on direct judgments about the adequacy of item or test performances or performance levels, the judgmental process should be designed so that judges can bring their knowledge and experience to bear in a reasonable way.

Comment: Cut scores are sometimes based on judgments about the adequacy of item or test performances (e.g., essay responses to a writing prompt) or performance levels (e.g., the level that would characterize a borderline examinee). The procedures used to elicit such judgments should result in reasonable, defensible standards that accurately reflect the judges' values and intentions. Reaching such judgments may be most straightforward when judges are asked to consider kinds of performances with which they are familiar and for which they have formed clear conceptions of adequacy or quality. When the responses elicited by a test neither sample nor closely simulate the use of tested knowledge or skills in the actual criterion domain, judges are not likely to approach the task with such clear understandings. Special care must then be taken to assure that judges have a sound basis for making the judgments requested. Thorough familiarity with descriptions of different proficiency categories, practice in judging task difficulty with feedback on accuracy, the experience of actually taking a form of the test, feedback on the failure rates entailed by provisional standards, and other forms of information may be beneficial in helping judges to reach sound and principled decisions.

5. TEST ADMINISTRATION, SCORING, AND REPORTING

Background

The usefulness and interpretability of test scores require that a test be administered and scored according to the developer's instructions. When directions to examinees, testing conditions, and scoring procedures follow the same detailed procedures, the test is said to be standardized. Without such standardization, the accuracy and comparability of score interpretations would be reduced. For tests designed to assess the examinee's knowledge, skills, or abilities, standardization helps to ensure that all examinees have the same opportunity to demonstrate their competencies. Maintaining test security also helps to ensure that no one has an unfair advantage.

Occasionally, however, situations arise in which modifications of standardized procedures may be advisable or legally mandated. Persons of different backgrounds, ages, or familiarity with testing may need nonstandard modes of test administration or a more comprehensive orientation to the testing process, in order that all test takers can come to the same understanding of the task. Standardized modes of presenting information or of responding may not be suitable for specific individuals, such as persons with some kinds of disability, or persons with limited proficiency in the language of the test, so that accommodations may be needed (see chapters 9 and 10). Large-scale testing programs generally have established specific procedures to be used in considering and granting accommodations. Some test users feel that any accommodation not specifically required by law could lead to a charge of unfair treatment and discrimination. Although accommodations are made with the intent of maintaining score comparability, the extent to which that is possible may not be known. Comparability of scores may be compromised, and the test may then not measure the same constructs for all test takers.

Tests and assessments differ in their degree of standardization. In many instances different examinees are given not the same test form, but equivalent forms that have been shown to yield comparable scores. Some assessments permit examinees to choose which tasks to perform or which pieces of their work are to be evaluated. A degree of standardization can be maintained by specifying the conditions of the choice and the criteria of evaluation of the products. When an assessment permits a certain kind of collaboration, the limits of that collaboration can be specified. With some assessments, test administrators may be expected to tailor their instructions to help assure that all examinees understand what is expected of them. In all such cases, the goal remains the same: to provide accurate and comparable measurement for everyone, and unfair advantage to no one. The degree of standardization is dictated by that goal, and by the intended use of the test.

Standardized directions to test takers help to ensure that all test takers understand the mechanics of test taking. Directions generally inform test takers how to make their responses, what kind of help they may legitimately be given if they do not understand the question or task, how they can correct inadvertent responses, and the nature of any time constraints. General advice is sometimes given about omitting item responses. Many tests, including computer-administered tests, require special equipment. Practice exercises are often presented in such cases to ensure that the test taker understands how to operate the equipment. The principle of standardization includes orienting test takers to materials with which they may not be familiar. Some equipment may be provided at the testing site, such as shop tools or balances. Opportunity for test takers to practice with the equipment will often be appropriate, unless using the equipment is the purpose of the test.

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Tests are sometimes administered by computer, with test responses made by keyboard, computer mouse, or similar device. Although many test takers are accustomed to computers, some are not and may need some brief explanation. Even those test takers who use computers will need to know about some details. Special issues arise in managing the testing environment, such as the arrangement of illumination so that light sources do not reflect on the computer screen, possibly interfering with display legibility. Maintaining a quiet environment can be challenging when candidates are tested separately, starting at different times and finishing at different times from neighboring test takers. Those who administer computer-based tests require training in the hardware and software used for the test, so that they can deal with problems that may arise in human-computer interactions.

Standardized scoring procedures help to ensure accurate scoring and reporting, which are essential in all circumstances. When scoring is done by machine, the accuracy of the machine is at issue, including any scoring algorithm. When scoring is done by human judges, scorers require careful training. Regular monitoring can also help to ensure that every test protocol is scored according to the same standardized criteria and that the criteria do not change as the test scorers progress through the submitted test responses.

Test scores, per se, are not readily interpreted without other information, such as norms or standards, indications of measurement error, and descriptions of test content. Just as a temperature of 50° in January is warm for Minnesota and cool for Florida, a test score of 50 is not meaningful without some context. When the scores are to be reported to persons who are not technical specialists, interpretive material can be provided that is readily understandable to those receiving the report. Often, the test user

provides an interpretation of the results for the test taker, suggesting the limitations of the results and the relationship of any reported scores to other information. Scores on some tests are not designed to be released to test takers; only broad test interpretations, or dichotomous classifications, such as pass/fail, are intended to be reported.

Interpretations of test results are sometimes prepared by computer systems. Such interpretations are generally based on a combination of empirical data and expert judgment and experience. In some professional applications of individualized testing, the computer-prepared interpretations are communicated by a professional, possibly with modifications for special circumstances. Such test interpretations require validation. Consistency with interpretations provided by nonalgorithmic approaches is clearly a concern.

In some large-scale assessments, the primary target of assessment is not the individual test taker but is a larger unit, such as a school district or an industrial plant. Often, different test takers are given different sets of items, following a carefully balanced matrix sampling plan, to broaden the range of information that can be obtained in a reasonable time period. The results acquire meaning when aggregated over many individuals taking different samples of items. Such assessments may not furnish enough information to support even minimally valid, reliable scores for individuals, as each individual may take only an incomplete test.

Some further issues of administration and scoring are discussed in chapter 3, "Test Development and Revision."

Standard 5.1

Test administrators should follow carefully the standardized procedures for administration and scoring specified by the test developer, unless the situation or a test taker's disability dictates that an exception should be made.

Comment: Specifications regarding instructions to test takers, time limits, the form of item presentation or response, and test materials or equipment should be strictly observed. In general, the same procedures should be followed as were used when obtaining the data for scaling and norming the test scores. A test taker with a disabling condition may require special accommodation. Other special circumstances may require some flexibility in administration. Judgments of the suitability of adjustments should be tempered by the consideration that departures from standard procedures may jeopardize the validity of the test score interpretations.

Standard 5.2

Modifications or disruptions of standardized test administration procedures or scoring should be documented.

Comment: Information about the nature of modifications of administration should be maintained in secure data files, so that research studies or case reviews based on test records can take this into account. This includes not only special accommodations for particular test takers, but also disruptions in the testing environment that may affect all test takers in the testing session. A researcher may wish to use only the records based on standardized administration. In other cases, research studies may depend on such information to form groups of respondents. Test users or test sponsors should establish policies concerning who keeps the files and who may have access to the files. Whether the information about

modifications is reported to users of test data, such as admissions officers, depends on different considerations (see chapters 8 and 10). If such reports are made, certain cautions may be appropriate.

Standard 5.3

When formal procedures have been established for requesting and receiving accommodations, test takers should be informed of these procedures in advance of testing.

Comment: When large-scale testing programs have established strict procedures to be followed, administrators should not depart from these procedures.

Standard 5.4

The testing environment should furnish reasonable comfort with minimal distractions.

Comment: Noise, disruption in the testing area, extremes of temperature, poor lighting, inadequate work space, illegible materials, and so forth are among the conditions that should be avoided in testing situations. The testing site should be readily accessible. Testing sessions should be monitored where appropriate to assist the test taker when a need arises and to maintain proper administrative procedures. In general, the testing conditions should be equivalent to those that prevailed when norms and other interpretative data were obtained.

Standard 5.5

Instructions to test takers should clearly indicate how to make responses. Instructions should also be given in the use of any equipment likely to be unfamiliar to test takers. Opportunity to practice responding should be given when equipment is involved, unless use of the equipment is being assessed.

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Comment: When electronic calculators are provided for use, examinees may need practice in using the calculator. Examinees may need practice responding with unfamiliar tasks, such as a numeric grid, which is sometimes used with mathematics performance items. In computer-administered tests, the method of responding may be unfamiliar to some test takers. Where possible, the practice responses should be monitored to ensure that the test taker is making acceptable responses. In some performance tests that involve tools or equipment, instructions may be needed for unfamiliar tools, unless accommodating to unfamiliar tools is part of what is being assessed. If a test taker is unable to use the equipment or make the responses, it may be appropriate to consider alternative testing modes.

Standard 5.6

Reasonable efforts should be made to assure the integrity of test scores by eliminating opportunities for test takers to attain scores by fraudulent means.

Comment: In large-scale testing programs where the results may be viewed as having important consequences, efforts to assure score integrity should include, when appropriate and practicable, stipulating requirements for identification, constructing seating charts, assigning test takers to seats, requiring appropriate space between seats, and providing continuous monitoring of the testing process. Test developers should design test materials and procedures to minimize the possibility of cheating. Test administrators should note and report any significant instances of testing irregularity. A local change in the date or time of testing may offer an opportunity for fraud. In general, steps should be taken to minimize the possibility of breaches in test security. In any evaluation of work products (e.g., portfolios) steps should be taken to ensure that the product represents the candidate's own work, and that the amount and kind of assistance provided should be consistent with the intent of

the assessment. Ancillary documentation, such as the date when the work was done, may be useful.

Standard 5.7

Test users have the responsibility of protecting the security of test materials at all times.

Comment: Those who have test materials under their control should, with due consideration of ethical and legal requirements, take all steps necessary to assure that only individuals with a legitimate need for access to test materials are able to obtain such access before the test administration, and afterwards as well, if any part of the test will be reused at a later time. Test users must balance test security with the rights of all test takers and test users. When sensitive test documents are challenged, it may be appropriate to employ an independent third party, using a closely supervised secure procedure to conduct a review of the relevant materials. Such secure procedures are usually preferable to placing tests, manuals, and an examinee's test responses in the public record.

Standard 5.8

Test scoring services should document the procedures that were followed to assure accuracy of scoring. The frequency of scoring errors should be monitored and reported to users of the service on reasonable request. Any systematic source of scoring errors should be corrected.

Comment: Clerical and mechanical errors should be examined. Scoring errors should be minimized and, when they are found, steps should be taken promptly to minimize their recurrence.

Standard 5.9

When test scoring involves human judgment, scoring rubrics should specify criteria for scor-

ing. Adherence to established scoring criteria should be monitored and checked regularly. Monitoring procedures should be documented.

Comment: Human scorers may be provided with scoring rubrics listing acceptable alternative responses, as well as general criteria. Consistency of scoring is often checked by rescoring randomly selected test responses and by rescoring some responses from earlier administrations. Periodic checks of the statistical properties (e.g., means, standard deviations) of scores assigned by individual scorers during a scoring session can provide feedback for the scorers, helping them to maintain scoring standards. Lack of consistent scoring may call for retraining or dismissing some scorers or for reexamining the scoring rubrics.

Standard 5.10

When test score information is released to students, parents, legal representatives, teachers, clients, or the media, those responsible for testing programs should provide appropriate interpretations. The interpretations should describe in simple language what the test covers, what scores mean, the precision of the scores, common misinterpretations of test scores, and how scores will be used.

Comment: Test users should consult the interpretive material prepared by the test developer or publisher and should revise or supplement the material as necessary to present the local and individual results accurately and clearly. Score precision might be depicted by error bands, or likely score ranges, showing the standard error of measurement.

Standard 5.11

When computer-prepared interpretations of test response protocols are reported, the sources, rationale, and empirical basis for these interpretations should be available, and their limitations should be described.

Comment: Whereas computer-prepared interpretations may be based on expert judgment, the interpretations are of necessity based on accumulated experience and may not be able to take into consideration the context of the individual's circumstances. Computer-prepared interpretations should be used with care in diagnostic settings, because they may not take into account other information about the individual test taker, such as age, gender, education, prior employment, and medical history, that provide context for test results.

Standard 5.12

When group-level information is obtained by aggregating the results of partial tests taken by individuals, validity and reliability should be reported for the level of aggregation at which results are reported. Scores should not be reported for individuals unless the validity, comparability, and reliability of such scores have been established.

Comment: Large-scale assessments often achieve efficiency by "matrix sampling" of the content domain by asking different test takers different questions. The testing then requires less time from each test taker, while the aggregation of individual results provides for domain coverage that can be adequate for meaningful group- or program-level interpretations, such as schools, or grade levels within a locality or particular subject-matter areas. Because the individual receives only an incomplete test, an individual score would have limited meaning. If individual scores are provided, comparisons between scores obtained by different individuals are based on responses to items that may cover different material. Some degree of calibration among incomplete tests can sometimes be made. Such calibration is essential to the comparisons of individual scores.

STANDARDS**TEST ADMINISTRATION, SCORING, AND REPORTING / PART I****Standard 5.13**

Transmission of individually identified test scores to authorized individuals or institutions should be done in a manner that protects the confidential nature of the scores.

Comment: Care is always needed when communicating the scores of identified test takers, regardless of the form of communication. Face-to-face communication, as well as telephone and written communication present well-known problems. Transmission by electronic media, including computer networks and facsimile, presents modern challenges to confidentiality.

Standard 5.14

When a material error is found in test scores or other important information released by a testing organization or other institution, a corrected score report should be distributed as soon as practicable to all known recipients who might otherwise use the erroneous scores as a basis for decision making. The corrected report should be labeled as such.

Comment: A material error is one that could change the interpretation of the test score. Innocuous typographical errors would be excluded. Timeliness is essential for decisions that will be made soon after the test scores are received.

Standard 5.15

When test data about a person are retained, both the test protocol and any written report should also be preserved in some form. Test users should adhere to the policies and record-keeping practice of their professional organizations.

Comment: The protocol may be needed to respond to a possible challenge from a test taker. The protocol would ordinarily be

accompanied by testing materials and test scores. Retention of more detailed records of responses would depend on circumstances and should be covered in a retention policy (see the following standard). Record keeping may be subject to legal and professional requirements. Policy for the release of any test information for other than research purposes is discussed in chapter 8.

Standard 5.16

Organizations that maintain test scores on individuals in data files or in an individual's records should develop a clear set of policy guidelines on the duration of retention of an individual's records, and on the availability, and use over time, of such data.

Comment: In some instances, test scores become obsolete over time, no longer reflecting the current state of the test taker. Outdated scores should generally not be used or made available, except for research purposes. In other cases, test scores obtained in past years can be useful as, for example, in longitudinal assessment. The key issue is the valid use of the information. Score retention and disclosure may be subject to legal and professional requirements.

6. SUPPORTING DOCUMENTATION FOR TESTS

Background

The provision of supporting documents for tests is the primary means by which test developers, publishers, and distributors communicate with test users. These documents are evaluated on the basis of their completeness, accuracy, currency, and clarity and should be available to qualified individuals as appropriate. A test's documentation typically specifies the nature of the test; its intended use; the processes involved in the test's development; technical information related to scoring, interpretation, and evidence of validity and reliability; scaling and norming if appropriate to the instrument; and guidelines for test administration and interpretation. The objective of the documentation is to provide test users with the information needed to make sound judgments about the nature and quality of the test, the resulting scores, and the interpretations based on the test scores. The information may be reported in documents such as test manuals, technical manuals, user's guides, specimen sets, examination kits, directions for test administrators and scorers, or preview materials for test takers.

Test documentation is most effective if it communicates information to multiple user groups. To accommodate the breadth of training of professionals who use tests, separate documents or sections of documents may be written for identifiable categories of users such as practitioners, consultants, administrators, researchers, and educators. For example, the test user who administers the tests and interprets the results needs interpretive information or guidelines. On the other hand, those who are responsible for selecting tests need to be able to judge the technical adequacy of the test. Therefore, some combination of technical manuals, user's guides, test manuals, test supplements, examination kits, or

specimen sets ordinarily is published to provide a potential test user or test reviewer with sufficient information to evaluate the appropriateness and technical adequacy of the test. The types of information presented in these documents typically include a description of the intended test-taking population, stated purpose of the test, test specifications, item formats, scoring procedures, and the test development process. Technical data, such as psychometric indices of the items, reliability and validity evidence, normative data, and cut scores or configural rules including those for computer-generated interpretations of test scores also are summarized.

An essential feature of the documentation for every test is a discussion of the known appropriate and inappropriate uses and interpretations of the test scores. The inclusion of illustrations of score interpretations, as they relate to the test developer's intended applications, also will help users make accurate inferences on the basis of the test scores. When possible, illustrations of improper test uses and inappropriate test score interpretations will help guard against the misuse of the test.

Test documents need to include enough information to allow test users and reviewers to determine the appropriateness of the test for its intended purposes. References to other materials that provide more details about research by the publisher or independent investigators should be cited and should be readily obtainable by the test user or reviewer. This supplemental material can be provided in any of a variety of published or unpublished forms; when demand is likely to be low, it may be maintained in archival form, including electronic storage. Test documentation is useful for all test instruments, including those that are developed exclusively for use within a single organization.

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In addition to technical documentation, descriptive materials are needed in some settings to inform examinees and other interested parties about the nature and content of the test. The amount and type of information will depend on the particular test and application. For example, in situations requiring informed consent, information should be sufficient to develop a reasoned judgment. Such information should be phrased in nontechnical language and should be as inclusive as is consistent with the use of the test scores. The materials may include a general description and rationale for the test; sample items or complete sample tests; and information about conditions of test administration, confidentiality, and retention of test results. For some applications, however, the true nature and purpose of a test are purposely hidden or disguised to prevent faking or response bias. In these instances, examinees may be motivated to reveal more or less of the characteristics intended to be assessed. Under these circumstances, hiding or disguising the true nature or purpose of the test is acceptable provided this action is consistent with legal principles and ethical standards.

This chapter provides general standards for the preparation and publication of test documentation. The other chapters contain specific standards that will be useful to test developers, publishers, and distributors in the preparation of materials to be included in a test's documentation.

Standard 6.1

Test documents (e.g., test manuals, technical manuals, user's guides, and supplemental material) should be made available to prospective test users and other qualified persons at the time a test is published or released for use.

Comment: The test developer or publisher should judge carefully which information should be included in first editions of the test manual, technical manual, or user's guides and which information can be provided in supplements. For low-volume, unpublished tests, the documentation may be relatively brief. When the developer is also the user, documentation and summaries are still necessary.

Standard 6.2

Test documents should be complete, accurate, and clearly written so that the intended reader can readily understand the content.

Comment: Test documents should provide sufficient detail to permit reviewers and researchers to judge or replicate important analyses published in the test manual. For example, reporting correlation matrices in the test document may allow the test user to judge the data upon which decisions and conclusions were based, or describing in detail the sample and the nature of any factor analyses that were conducted will allow the test user to replicate reported studies.

Standard 6.3

The rationale for the test, recommended uses of the test, support for such uses, and information that assists in score interpretation should be documented. Where particular misuses of a test can be reasonably anticipated, cautions against such misuses should be specified.

Comment: Test publishers make every effort to caution test users against known misuses of

tests. However, test publishers are not required to anticipate all possible misuses of a test. If publishers do know of persistent test misuse by a test user, extraordinary educational efforts may be appropriate.

Standard 6.4

The population for whom the test is intended and the test specifications should be documented. If applicable, the item pool and scale development procedures should be described in the relevant test manuals. If normative data are provided, the norming population should be described in terms of relevant demographic variables, and the year(s) in which the data were collected should be reported.

Comment: Known limitations of a test for certain populations also should be clearly delineated in the test documents. In addition, if the test is available in more than one language, test documents should provide information on the translation or adaptation procedures, on the demographics of each norming sample, and on score interpretation issues for each language into which the test has been translated.

Standard 6.5

When statistical descriptions and analyses that provide evidence of the reliability of scores and the validity of their recommended interpretations are available, the information should be included in the test's documentation. When relevant for test interpretation, test documents ordinarily should include item level information, cut scores and configural rules, information about raw scores and derived scores, normative data, the standard errors of measurement, and a description of the procedures used to equate multiple forms.

Standard 6.6

When a test relates to a course of training or study, a curriculum, a textbook, or packaged

instruction, the documentation should include an identification and description of the course or instructional materials and should indicate the year in which these materials were prepared.

Standard 6.7

Test documents should specify qualifications that are required to administer a test and to interpret the test scores accurately.

Comment: Statements of user qualifications need to specify the training, certification, competencies, or experience needed to have access to a test.

Standard 6.8

If a test is designed to be scored or interpreted by test takers, the publisher and test developer should provide evidence that the test can be accurately scored or interpreted by the test takers. Tests that are designed to be scored and interpreted by the test taker should be accompanied by interpretive materials that assist the individual in understanding the test scores and that are written in language that the test taker can understand.

Standard 6.9

Test documents should cite a representative set of the available studies pertaining to general and specific uses of the test.

Comment: Summaries of cited studies—including published works, dissertations, or proprietary documents—should be made available on request to test users and researchers by the publisher.

Standard 6.10

Interpretive materials for tests, that include case studies, should provide examples illustrating the diversity of prospective test takers.

Comment: For some instruments, the presentation of case studies that are intended to

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assist the user in the interpretation of the test scores and profiles also will be appropriate for inclusion in the test documentation. For example, case studies might cite as appropriate examples of women and men of different ages; individuals differing in sexual orientation; persons representing various ethnic, cultural, or racial groups; and individuals with special needs. The inclusion of examples illustrating the diversity of prospective test takers is not intended to promote interpretation of test scores in a manner inconsistent with legal requirements that may restrict certain practices in some contexts, such as employee selection.

Standard 6.11

If a test is designed so that more than one method can be used for administration or for recording responses—such as marking responses in a test booklet, on a separate answer sheet, or on a computer keyboard—then the manual should clearly document the extent to which scores arising from these methods are interchangeable. If the results are not interchangeable, this fact should be reported, and guidance should be given for the interpretation of scores obtained under the various conditions or methods of administration.

Standard 6.12

Publishers and scoring services that offer computer-generated interpretations of test scores should provide a summary of the evidence supporting the interpretations given.

Comment: The test user should be informed of any cut scores or configural rules necessary for understanding computer-generated score interpretations. A description of both the samples used to derive cut scores or configural rules and the methods used to derive the cut scores should be provided. When proprietary interests result in the withholding of cut scores or configural rules, the owners of the intellectual

property are responsible for documenting evidence in support of the validity of computer-generated score interpretations. Such evidence might be provided, for example, by reporting the finding of an independent review of the algorithms by qualified professionals.

Standard 6.13

When substantial changes are made to a test, the test's documentation should be amended, supplemented, or revised to keep information for users current and to provide useful additional information or cautions.

Standard 6.14

Every test form and supporting document should carry a copyright date or publication date.

Comment: During the operational life of a test, new or revised test forms may be published, and manuals and other materials may be added or revised. Users and potential users are entitled to know the publication dates of various documents that include test norms. Communication among researchers is hampered when the particular test documents used in experimental studies are ambiguously referenced in research reports.

Standard 6.15

Test developers, publishers, and distributors should provide general information for test users and researchers who may be required to determine the appropriateness of an intended test use in a specific context. When a particular test use cannot be justified, the response to an inquiry from a prospective test user should indicate this fact clearly. General information also should be provided for test takers and legal guardians who must provide consent prior to a test's administration.

PART II

Fairness in Testing

7. FAIRNESS IN TESTING AND TEST USE

Background

This chapter addresses overriding issues of fairness in testing. It is intended both to emphasize the importance of fairness in all aspects of testing and assessment and to serve as a context for the technical standards. Later chapters address in greater detail some fairness issues involving the responsibilities of test users, the rights and responsibilities of test takers, the testing of individuals of diverse linguistic backgrounds, and the testing of those with disabilities. Chapters 12 through 15 also address some fairness issues specific to psychological, educational, employment and credentialing, and program evaluation applications of testing and assessment.

Concern for fairness in testing is pervasive, and the treatment accorded the topic here cannot do justice to the complex issues involved. A full consideration of fairness would explore the many functions of testing in relation to its many goals, including the broad goal of achieving equality of opportunity in our society. It would consider the technical properties of tests, the ways test results are reported, and the factors that are validly or erroneously thought to account for patterns of test performance for groups and individuals. A comprehensive analysis would also examine the regulations, statutes, and case law that govern test use and the remedies for harmful practices. The *Standards* cannot hope to deal adequately with all these broad issues, some of which have occasioned sharp disagreement among specialists and other thoughtful observers. Rather, the focus of the *Standards* is on those aspects of tests, testing, and test use that are the customary responsibilities of those who make, use, and interpret tests, and that are characterized by some measure of professional and technical consensus.

Absolute fairness to every examinee is impossible to attain, if for no other reasons than the facts that tests have imperfect reliability and that validity in any particular context is a matter of degree. But neither is any alternative selection or evaluation mechanism perfectly fair. Properly designed and used, tests can and do further societal goals of fairness and equality of opportunity. Serious technical deficiencies in test design, use, or interpretation should, of course, be addressed, but the fairness of testing in any given context must be judged relative to that of feasible test and nontest alternatives. It is general practice that large-scale tests are subjected to careful review and empirical checks to minimize bias. The amount of explicit attention to fairness in the design of well-made tests compares favorably to that of many alternative selection or evaluation methods.

It is also crucial to bear in mind that test settings are interpersonal. The interaction of examiner with examinee should be professional, courteous, caring, and respectful. In most testing situations, the roles of examiner and examinee are sharply unequal in status. A professional's inferences and reports from test findings may markedly impact the life of the person who is examined. Attention to these aspects of test use and interpretation is no less important than more technical concerns.

As is emphasized in professional education and training, users of tests should be alert to the possibility that human issues involving examiner and examinee may sometimes affect test fairness. Attention to interpersonal issues is always important, perhaps especially so when examinees have a disability or differ from the examiner in ethnic, racial, or religious background; in gender or sexual orientation; in socioeconomic status; in age; or in other respects that may affect the examinee-examiner interaction.

Varying Views of Fairness

The term *fairness* is used in many different ways and has no single technical meaning. It is possible that two individuals may endorse fairness in testing as a desirable social goal, yet reach quite different conclusions about the fairness of a given testing program. Outlined below are four principal ways in which the term fairness is used. It should be noted, however, that many additional interpretations may be found in the technical and popular literature.

The first two characterizations presented here relate fairness to absence of bias and to equitable treatment of all examinees in the testing process. There is broad consensus that tests should be free from bias (as defined below) and that all examinees should be treated fairly in the testing process itself (e.g., afforded the same or comparable procedures in testing, test scoring, and use of scores). The third characterization of test fairness addresses the equality of testing outcomes for examinee subgroups defined by race, ethnicity, gender, disability, or other characteristics. The idea that fairness requires equality in overall passing rates for different groups has been almost entirely repudiated in the professional testing literature. A more widely accepted view would hold that examinees of equal standing with respect to the construct the test is intended to measure should on average earn the same test score, irrespective of group membership. Unfortunately, because examinees' levels of the construct are measured imperfectly, this requirement is rarely amenable to direct examination. The fourth definition of fairness relates to equity in opportunity to learn the material covered in an achievement test. There would be general agreement that adequate opportunity to learn is clearly relevant to some uses and interpretations of achievement tests and clearly irrelevant to others, although disagreement might arise as to the relevance of opportunity to learn to test fairness in some specific situations.

FAIRNESS AS LACK OF BIAS

Bias is used here as a technical term. It is said to arise when deficiencies in a test itself or the manner in which it is used result in different meanings for scores earned by members of different identifiable subgroups. When evidence of such deficiencies is found at the level of item response patterns for members of different groups, the terms *item bias* or *differential item functioning* (DIF) are often used. When evidence is found by comparing the patterns of association for different groups between test scores and other variables, the term *predictive bias* may be used. The concept of bias and techniques for its detection are discussed below and are also discussed in other chapters of the *Standards*. There is general consensus that consideration of bias is critical to sound testing practice.

FAIRNESS AS EQUITABLE TREATMENT IN THE TESTING PROCESS

There is consensus that just treatment throughout the testing process is a necessary condition for test fairness. There is also consensus that fair treatment of all examinees requires consideration not only of a test itself, but also the context and purpose of testing and the manner in which test scores are used. A well-designed test is not intrinsically fair or unfair, but the use of the test in a particular circumstance or with particular examinees may be fair or unfair. Unfairness can have individual and collective consequences.

Regardless of the purpose of testing, fairness requires that all examinees be given a comparable opportunity to demonstrate their standing on the construct(s) the test is intended to measure. Just treatment also includes such factors as appropriate testing conditions and equal opportunity to become familiar with the test format, practice materials, and so forth. In situations where individual or group test results are reported, just treatment also implies that such reporting should be accurate and fully informative.

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Fairness also requires that all examinees be afforded appropriate testing conditions. Careful standardization of tests and administration conditions generally helps to assure that examinees have comparable opportunity to demonstrate the abilities or attributes to be measured. In some cases, however, aspects of the testing process that pose no particular challenge for most examinees may prevent specific groups or individuals from accurately demonstrating their standing with respect to the construct of interest (e.g., due to disability or language background). In some instances, greater comparability may sometimes be attained if standardized procedures are modified. There are contexts in which some such modifications are forbidden by law and other contexts in which some such modifications are required by law. In all cases, standardized procedures should be followed for all examinees unless explicit, documented accommodations have been made.

Ideally, examinees would also be afforded equal opportunity to prepare for a test. Examinees should in any case be afforded equal access to materials provided by the testing organization and sponsor which describe the test content and purpose and offer specific familiarization and preparation for test taking. In addition to assuring equity in access to accepted resources for test preparation, this principle covers test security for nondisclosed tests. If some examinees were to have prior access to the contents of a secure test, for example, basing decisions upon the relative performance of different examinees would be unfair to others who did not have such access. On tests that have important individual consequences, all examinees should have a meaningful opportunity to provide input to relevant decision makers if procedural irregularities in testing are alleged, if the validity of the individual's score is challenged or may not be reported, or if similar special circumstances arise.

Finally, the conception of fairness as equitable treatment in the testing process extends to the reporting of individual and group test results. Individual test score information is entitled to confidential treatment in most circumstances. Confidentiality should be respected; scores should be disclosed only as appropriate. When test scores are reported, either for groups or individuals, score reports should be accurate and informative. It may be especially important when reporting results to nonprofessional audiences to use appropriate language and wording and to try to design reports to reduce the likelihood of inappropriate interpretations. When group achievement differences are reported, for example, including additional information to help the intended audience understand confounding factors such as unequal educational opportunity may help to reduce misinterpretation of test results and increase the likelihood that tests will be used wisely.

FAIRNESS AS EQUALITY IN OUTCOMES OF TESTING

The idea that fairness requires overall passing rates to be comparable across groups is not generally accepted in the professional literature. Most testing professionals would probably agree that while group differences in testing outcomes should in many cases trigger heightened scrutiny for possible sources of test bias, outcome differences across groups do not in themselves indicate that a testing application is biased or unfair. It might be argued that when tests are used for selection, persons who all would perform equally well on the criterion measure if selected should have an equal chance of being chosen regardless of group membership. Unfortunately, there is rarely any direct procedure for determining whether this ideal has been met. Moreover, if score distributions differ from one group to another, it is generally impossible to satisfy this ideal using any test that has a less than perfect correlation with the criterion measure.

Many testing professionals would agree that if a test is free of bias and examinees have received fair treatment in the testing process, then the conditions of fairness have been met. That is, given evidence of the validity of intended test uses and interpretations, including evidence of lack of bias and attention to issues of fair treatment, fairness has been established regardless of group-level outcomes. This view need not imply that unequal testing outcomes should be ignored altogether. They may be important in generating new hypotheses about bias and fair treatment. But in this view, unequal outcomes at the group level have no direct bearing on questions of test fairness. There may be legal requirements to investigate certain differences in outcomes of testing among subgroups. Those requirements further may provide that, other things being equal, a testing alternative that minimizes outcome differences across relevant subgroups should be used. The standards in this chapter are intended to be applied in a manner consistent with legal and regulatory standards.

FAIRNESS AS OPPORTUNITY TO LEARN

This final conception of fairness arises in connection with educational achievement testing. In many contexts, achievement tests are intended to assess what a test taker knows or can do as a result of formal instruction. When some test takers have not had the opportunity to learn the subject matter covered by the test content, they are likely to get low scores. The test score may accurately reflect what the test taker knows and can do, but low scores may have resulted in part from not having had the opportunity to learn the material tested as well as from having had the opportunity and having failed to learn. When test takers have not had the opportunity to learn the material tested, the policy of using their test scores as a basis for withholding a high school diploma, for example, is viewed as unfair. This issue is further discussed in chapter 13, on educational testing.

At least three important difficulties arise with this conception of fairness. First, the definition of *opportunity to learn* is difficult in practice, especially at the level of individuals. Opportunity is a matter of degree. Moreover, the measurement of some important learning outcomes may require students to work with material they have not seen before. Second, even if it is possible to document the topics included in the curriculum for a group of students, specific content coverage for any one student may be impossible to determine. Finally, there is a well-founded desire to assure that credentials attest to certain proficiencies or capabilities. Granting a diploma to a low-scoring examinee on the grounds that the student had insufficient opportunity to learn the material tested means certifying someone who has not attained the degree of proficiency the diploma is intended to signify.

It should be noted that opportunity to learn ordinarily plays no role in determining the fairness of tests used for employment and credentialing, which are covered in chapter 14, nor of admissions testing. In those circumstances, it is deemed fair that the test should cover the full range of requisite knowledge and skills. However, there are situations in which the agency that determines the contents of a test used for employment or credentialing also sets the curriculum that must be followed in preparing to take the test. In such cases, it is the responsibility of that agency to assure that what is to be tested is fully included in the specification of what is to be taught.

Bias Associated With Test Content and Response Processes

The term *bias* in tests and testing refers to construct-irrelevant components that result in systematically lower or higher scores for identifiable groups of examinees. Such construct-irrelevant score components may be introduced due to inappropriate sampling of

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test content or lack of clarity in test instructions. They may also arise if scoring criteria fail to credit fully some correct problem approaches or solutions that are more typical of one group than another. Evidence of these potential sources of bias may be sought in the content of the tests, in comparisons of the internal structure of test responses for different groups, and in comparisons of the relationships of test scores to other measures, although none of these types of evidence is unequivocal.

CONTENT-RELATED SOURCES OF TEST BIAS

Bias due to inappropriate selection of test content may sometimes be detected by inspection of the test itself. In some testing contexts, it is common for test developers to engage an independent panel of diverse experts to review test content for language that might be interpreted differently by members of different groups and for material that might be offensive or emotionally disturbing to some test takers. For performance assessments, panels are often engaged to review the scoring rubric as well. A test intended to measure verbal analogical reasoning, for example, should include words in general use, not words and expressions associated with particular disciplines, occupations, ethnic groups, or locations. Where material likely to be differentially interesting or relevant to some examinees is included, it may be balanced by material that may be of particular interest to the remaining examinees.

In educational achievement testing, alignment with curriculum may bear on questions of content-related test bias. One may ask how well a test represents some content domain and also whether that domain is appropriate given intended score interpretations. A test of 19th-century United States history might give considerable emphasis to the War of 1812, the Mexican War, the Civil War, and the Spanish American War. If some state's curriculum framework dealt relatively

lightly with these wars, devoting more attention instead, say, to social and industrial developments, then that state's test takers might be relatively disadvantaged.

Bias may also result from a lack of clarity in test instructions or from scoring rubrics that credit responses more typical of one group than another. For example, cognitive ability tests often require test takers to classify objects according to an unspecified rule. If a given task credits classification on the basis of the stimulus objects' functions, but an identifiable subgroup of examinees tends to classify the objects on the basis of their physical appearance, faulty test interpretations are likely. Similarly, if the scoring rubric for a constructed response item reserves the highest score level for those examinees who in fact provide more information or elaboration than was actually requested, then less test-wise examinees who simply follow instructions will earn lower scores. In this case, testwiseness becomes a construct-irrelevant component of test scores.

Judgmental methods for the review of tests and test items are often supplemented by statistical procedures for identifying items on tests that function differently across identifiable subgroups of examinees. Differential item functioning (DIF) is said to exist when examinees of equal ability differ on average, according to their group membership, in their responses to a particular item. If examinees from each group are divided into subgroups according to the tested ability and subgroups at the same ability level have unequal probabilities of answering a given item correctly, then there is evidence that that item may not be functioning as intended. It may be measuring something different from the remainder of the test or it may be measuring with different levels of precision for different subgroups of examinees. Such an item may offer a valid measurement of some narrow element of the intended construct, or it may tap some construct-irrelevant component that advantages

or disadvantages members of one group. Although DIF procedures may hold some promise for improving test quality, there has been little progress in identifying the causes or substantive themes that characterize items exhibiting DIF. That is, once items on a test have been statistically identified as functioning differently from one examinee group to another, it has been difficult to specify the reasons for the differential performance or to identify a common deficiency among the identified items.

RESPONSE-RELATED SOURCES OF TEST BIAS

In some cases, construct-irrelevant score components may arise because test items elicit varieties of responses other than those intended or can be solved in ways that were not intended. For example, clients responding to a diagnostic inventory may attempt to provide the answers they think the test administrator expects as opposed to the answers that best describe themselves. To the extent that such response acquiescence is more typical of some groups than others, bias may result. Bias may also be associated with test response formats that pose particular difficulties for one group or another. For example, test performance may rely on some capability (e.g., English language proficiency or fine-motor coordination) that is irrelevant to the intent of the measurement but nonetheless poses impediments for some examinees. A test of quantitative reasoning that makes inappropriately heavy demands on verbal ability would probably be biased against examinees whose first language is other than that of the test.

In addition to content reviews and DIF analyses, evidence of bias related to response processes may be provided by comparisons of the internal structure of the test responses for different groups of examinees. If an analysis of the factors or dimensions underlying test performance reveals different internal structures for different groups, it may be that different constructs are being measured or it

may simply be that groups differ in their variability with respect to the same underlying dimensions. When there is evidence that tests, including personality tests, measure different constructs in different gender, racial, or cultural groups, it is important to determine that the internal structure of the test supports inferences made for clients from these distinct subgroups of the client population. In situations where internal test structure varies markedly across ethnically diverse cultures, it may be inappropriate to make direct comparisons of scores of members of these different cultural groups.

Bias may also be indicated by patterns of association between test scores and other variables. Perhaps the most familiar form such evidence may take is a difference across groups in the regression equations relating selection test performance to criterion performance. This case is discussed at greater length in the following section. However, evidence of bias based on relations to other variables may also take many other forms. The relationship between two tests of the same cognitive ability might be found to differ from one group to another, for example. Such a difference might indicate bias in one or both tests. As another instance, a higher than expected association between reading and mathematics achievement test scores among students who might well have limited English proficiency could trigger an investigation to determine whether language proficiency was influencing some examinees' mathematics scores. Patterns of score averages or other distributional summaries might also point to potential sources of test bias. If males outperformed females on one measure of academic performance and, in the same population, females outperformed males on another, it would follow that the two measures could not both be linearly related to the identical underlying construct. Note, however, that if the tested populations differed, if the content domains sampled differed, or if

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the constructs tested otherwise differed due to varying motivational contexts or other effects, two reliable tests, each valid for its intended purpose, might show such a pattern. Association need not imply any direct or causal linkage, and alternative explanations for patterns of association should usually be considered. In some cases, a test-criterion correlation may arise because the test and criterion both depend on the same construct-irrelevant ability. If identifiable subgroups differ with respect to that extraneous ability, then bias may result.

Fairness in Selection and Prediction

When tests are used for selection and prediction, evidence of bias or lack of bias is generally sought in the relationships between test and criterion scores for the respective groups. Under one broadly accepted definition, no bias exists if the regression equations relating the test and the criterion are indistinguishable for the groups in question. (Some formulations may hold that not only regression slopes and intercepts but also standard errors of estimate must be equal.) If test-criterion relationships differ, different decision rules may be followed depending on the group to which the person belongs.

If fitting a common prediction equation for all groups combined suggests that the criterion performance of persons in any one group is systematically overpredicted or underpredicted, and if bias in the criterion measure has been set aside as a possible explanation, one possibility is to generate a separate prediction formula for each group. Another possibility is to seek predictor variables that may be used in lieu of or in addition to the initial predictor score to reduce differential prediction without reducing overall predictive accuracy. If separate regression equations are employed, the effect of their use on the distribution of predicted criterion

scores for the different groups should be examined. Note that in the United States, the use of different selection rules for identifiable subgroups of examinees is legally proscribed in some contexts. There may, however, be legal requirements to consider alternative selection procedures in some such situations.

There is often tension between the perspective that equates fairness with lack of bias, in the technical sense, and the perspective that focuses on testing outcomes. A test that is valid for its intended purpose might be considered fair if a given test score predicts the same performance level for members of all groups. It might nonetheless be regarded by some as unfair, however, if average test scores differ across groups. This is because a given selection score and criterion threshold will often result in proportionately more false negative decisions in groups with lower mean test scores. In other words, a lower-scoring group will usually have a higher proportion of examinees who are rejected on the basis of their test scores even though they would have performed successfully if they had been selected. This seeming paradox is a statistical consequence of the imperfect correlation between test and criterion. It does not occur because of any other property of the test and has no direct relationship to group demographics. It is a purely statistical phenomenon that occurs as a function of lower test scores, regardless of group membership. For example, it usually occurs when the top and bottom test score halves of the majority group are compared. The fairness of a test or another predictor should be evaluated relative to that of nontest alternatives that might be used instead.

GROUP OUTCOME DIFFERENCES DUE TO CHOICE OF PREDICTORS

Success in virtually all real-world endeavors requires multiple skills and abilities, which may interact in complex ways. Testing programs typically address only a

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subset of these. Some skills and abilities are excluded because they are assessed in other components of the selection process (e.g., completion of course work or an interview); others may be excluded because reliable and valid measurement is economically, logistically, or administratively infeasible. Success in college, for example, requires perseverance, motivation, good study habits, and a host of other factors in addition to verbal and quantitative reasoning ability. Even if each of the criteria employed in a selection process is demonstrably valid and appropriate for that purpose, issues of fairness may arise in the choice of which factors are measured. If identifiable groups differ in their average levels of measured versus unmeasured job-relevant characteristics, then fairness becomes a concern at the group level as well as the individual level.

Can Consensus Be Achieved?

It is unlikely that consensus in society at large or within the measurement community is imminent on all matters of fairness in the use of tests. As noted earlier, fairness is defined in a variety of ways and is not exclusively addressed in technical terms; it is subject to different definitions and interpretations in different social and political circumstances. According to one view, the conscientious application of an unbiased test in any given situation is fair, regardless of the consequences for individuals or groups. Others would argue that fairness requires more than satisfying certain technical requirements. It bears repeating that while the *Standards* will provide more specific guidance on matters of technical adequacy, matters of values and public policy are crucial to responsible test use.

Standard 7.1

When credible research reports that test scores differ in meaning across examinee subgroups for the type of test in question, then to the extent feasible, the same forms of validity evidence collected for the examinee population as a whole should also be collected for each relevant subgroup. Subgroups may be found to differ with respect to appropriateness of test content, internal structure of test responses, the relation of test scores to other variables, or the response processes employed by individual examinees. Any such findings should receive due consideration in the interpretation and use of scores as well as in subsequent test revisions.

Comment: Scores differ in meaning across subgroups when the same score produces systematically different inferences about examinees who are members of different subgroups. In those circumstances where credible research reports differences in score meaning for particular subgroups for the type of test in question, this standard calls for separate, parallel analyses of data for members of those subgroups, sample sizes permitting. Relevant examinee subgroups may be defined by race or ethnicity, culture, language, gender, disability, age, socioeconomic status, or other classifications. Not all forms of evidence can be examined separately for members of all such groups. The validity argument may rely on existing research literature, for example, and such literature may not be available for some populations. For some kinds of evidence, some separate subgroup analyses may not be feasible due to the limited number of cases available. Data may sometimes be accumulated so that these analyses can be performed after the test has been in use for a period of time. This standard is not satisfied by assuring that such groups are represented within larger, pooled samples, although this

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may also be important. In giving “due consideration in the interpretation and use of scores,” pursuant to this standard, test users should be mindful of legal restrictions that may prohibit or limit within-group scoring and other practices.

Standard 7.2

When credible research reports differences in the effects of construct-irrelevant variance across subgroups of test takers on performance on some part of the test, the test should be used if at all only for those subgroups for which evidence indicates that valid inferences can be drawn from test scores.

Comment: An obvious reason why a test may not measure the same constructs across subgroups is that different components come into play from one subgroup to another. Alternatively, an irrelevant component may have a more significant effect on the performance of examinees in one subgroup than in another. Such intrusive elements are rarely entirely absent for any subgroup but are seldom present to any great extent. The decision whether or not to use a test with any given examinee subgroup necessarily involves a careful analysis of the validity evidence for different subgroups, as called for in Standard 7.1, and the exercise of thoughtful professional judgment regarding the significance of the irrelevant components.

A conclusion that a test is not appropriate for a particular subgroup requires an alternative course of action. This may involve a search for a test that can be used for all groups or, in circumstances where it is feasible to use different construct-equivalent tests for different groups, for an alternative test for use in the subgroup for which the intended construct is not well measured by the current test. In some cases multiple tests may be used in combination,

and a composite that permits valid inferences across subgroups may be identified. In some circumstances, such as employment testing, there may be legal or other constraints on the use of different tests for different subgroups.

It is acknowledged that there are occasions where examinees may request or demand to take a version of the test other than that deemed most appropriate by the developer or user. An individual with a disability may decline an alternate form and request the standard form. Acceding to this request, after ensuring that the examinee is fully informed about the test and how it will be used, is not a violation of this standard.

Standard 7.3

When credible research reports that differential item functioning exists across age, gender, racial/ethnic, cultural, disability, and/or linguistic groups in the population of test takers in the content domain measured by the test, test developers should conduct appropriate studies when feasible. Such research should seek to detect and eliminate aspects of test design, content, and format that might bias test scores for particular groups.

Comment: Differential item functioning exists when examinees of equal ability differ, on average, according to their group membership in their responses to a particular item. In some domains, existing research may indicate that differential item functioning occurs infrequently and does not replicate across samples. In others, research evidence may indicate that differential item functioning occurs reliably at meaningful above-chance levels for some particular groups; it is to such circumstances that the standard applies. Although it may not be possible prior to first release of a test to

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study the question of differential item functioning for some such groups, continued operational use of a test may afford opportunities to check for differential item functioning.

Standard 7.4

Test developers should strive to identify and eliminate language, symbols, words, phrases, and content that are generally regarded as offensive by members of racial, ethnic, gender, or other groups, except when judged to be necessary for adequate representation of the domain.

Comment: Two issues are involved. The first deals with the inadvertent use of language that, unknown to the test developer, has a different meaning or connotation in one subgroup than in others. Test publishers often conduct sensitivity reviews of all test material to detect and remove sensitive material from the test. The second deals with settings in which sensitive material is essential for validity. For example, history tests may appropriately include material on slavery or Nazis. Tests on subjects from the life sciences may appropriately include material on evolution. A test of understanding of an organization's sexual harassment policy may require employees to evaluate examples of potentially offensive behavior.

Standard 7.5

In testing applications involving individualized interpretations of test scores other than selection, a test taker's score should not be accepted as a reflection of standing on the characteristic being assessed without consideration of alternate explanations for the test taker's performance on that test at that time.

Comment: Many test manuals point out variables that should be considered in interpreting test scores, such as clinically relevant history, school record, vocational status, and test-taker motivation. Influences associated with variables such as socioeconomic status, ethnicity, gender, cultural background, language, or age may also be relevant. In addition, medication, visual impairments, or other disabilities may affect a test taker's performance on, for example, a paper-and-pencil test of mathematics.

Standard 7.6

When empirical studies of differential prediction of a criterion for members of different subgroups are conducted, they should include regression equations (or an appropriate equivalent) computed separately for each group or treatment under consideration or an analysis in which the group or treatment variables are entered as moderator variables.

Comment: Correlation coefficients provide inadequate evidence for or against a differential prediction hypothesis if groups or treatments are found not to be approximately equal with respect to both test and criterion means and variances. Considerations of both regression slopes and intercepts are needed. For example, despite equal correlations across groups, differences in intercepts may be found.

Standard 7.7

In testing applications where the level of linguistic or reading ability is not part of the construct of interest, the linguistic or reading demands of the test should be kept to the minimum necessary for the valid assessment of the intended construct.

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Comment: When the intent is to assess ability in mathematics or mechanical comprehension, for example, the test should not contain unusual words or complicated syntactic conventions unrelated to the mathematical or mechanical skill being assessed.

Standard 7.8

When scores are disaggregated and publicly reported for groups identified by characteristics such as gender, ethnicity, age, language proficiency, or disability, cautionary statements should be included whenever credible research reports that test scores may not have comparable meaning across these different groups.

Comment: Comparisons across groups are only meaningful if scores have comparable meaning across groups. The standard is intended as applicable to settings where scores are implicitly or explicitly presented as comparable in score meaning across groups.

Standard 7.9

When tests or assessments are proposed for use as instruments of social, educational, or public policy, the test developers or users proposing the test should fully and accurately inform policymakers of the characteristics of the tests as well as any relevant and credible information that may be available concerning the likely consequences of test use.

Standard 7.10

When the use of a test results in outcomes that affect the life chances or educational opportunities of examinees, evidence of mean test score differences between relevant subgroups of examinees should, where feasible, be examined for subgroups for which credible research reports mean differences for similar tests. Where mean

differences are found, an investigation should be undertaken to determine that such differences are not attributable to a source of construct underrepresentation or construct-irrelevant variance. While initially the responsibility of the test developer, the test user bears responsibility for uses with groups other than those specified by the developer.

Comment: Examples of such test uses include situations in which a test plays a dominant role in a decision to grant or withhold a high school diploma or to promote a student or retain a student in grade. Such an investigation might include a review of the cumulative research literature or local studies, as appropriate. In some domains, such as cognitive ability testing in employment, a substantial relevant research base may preclude the need for local studies. In educational settings, as discussed in chapter 13, potential differences in opportunity to learn may be relevant as a possible source of mean differences.

Standard 7.11

When a construct can be measured in different ways that are approximately equal in their degree of construct representation and freedom from construct-irrelevant variance, evidence of mean score differences across relevant subgroups of examinees should be considered in deciding which test to use.

Comment: Mean score differences, while important, are but one factor influencing the choice between one test and another. Cost, testing time, test security, and logistic issues (e.g., an application where very large numbers of examinees must be screened in a very short time) are among the issues also entering into the professional judgment about test use.

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Standard 7.12

The testing or assessment process should be carried out so that test takers receive comparable and equitable treatment during all phases of the testing or assessment process.

Comment: For example, should a person administering a test or interpreting test results recognize a personal bias for or against an examinee, or for or against any subgroup of which the examinee is a member, the person could take a variety of steps ranging from seeking a review of test interpretations from a colleague to withdrawal from the testing process.

8. THE RIGHTS AND RESPONSIBILITIES OF TEST TAKERS

Background

This chapter addresses fairness issues unique to the interests of the individual test taker. Fair treatment of test takers is not only a matter of equity, but also promotes the validity and reliability of the inferences made from the test performance. The standards presented in this chapter reflect widely accepted principles in the field of measurement. The standards address the responsibilities of test takers with regard to test security, their access to test results, and their rights when irregularities in their testing are claimed. Other issues of fairness are treated in other chapters: general principles in chapter 7; the testing of linguistic minorities in chapter 9; the testing of persons with disabilities in chapter 10. General considerations concerning reports of test results are covered in chapter 5.

Test takers have the right to be assessed with tests that meet current professional standards, including standards of technical quality, fairness, administration, and reporting of results. Fair and equitable treatment of test takers involves providing, in advance of testing, information about the nature of the test, the intended use of test scores, and the confidentiality of the results. Test takers, or their legal representatives when appropriate, need enough information about the test and the intended use of test results to reach a competent decision about participating in testing. In some instances, formal informed consent for testing is required by law or by other standards of professional practice, such as those governing research on human subjects. The greater the consequences to the test taker, the greater the importance of ensuring that the test taker is fully informed about the test and voluntarily consents to participate, except when testing without consent is permitted by law. If a test is optional, the test

taker has the right to know the consequences of taking or not taking the test. The test taker has the right to acceptable opportunities for asking questions or expressing concerns, and may expect timely responses to legitimate questions.

Where consistent with the purposes and nature of the assessment, general information is usually provided about the test's content and purposes. Some programs, in the interests of fairness, provide all test takers with helpful materials, such as study guides, sample questions, or complete sample tests, when such information does not jeopardize the validity of the results from future test administration. Advice may also be provided about test-taking strategies, including time management, and the advisability of omitting an item response, when it is permitted. Information is made known about the availability of special accommodations for those who need them. The policy on retesting may be stated, in case the test taker feels that the present performance does not appropriately reflect his/her best performance.

As participants in the assessment, test takers have responsibilities as well as rights. Their responsibilities include preparing themselves for the test, following the directions of the test administrator, representing themselves honestly on the test, and informing appropriate persons if they believe the test results do not adequately reflect them. In group testing situations, test takers are expected not to interfere with the performance of other test takers.

Test validity rests on the assumption that a test taker has earned fairly a particular score or pass/fail decision. Any form of cheating, or other behavior that reduces the fairness and validity of a test, is irresponsible.

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ble, is unfair to other test takers and may lead to sanctions. It is unfair for a test taker to use aids that are prohibited. It is unfair for a test taker to arrange for someone else to take the test in his/her place. The test taker is obligated to respect the copyrights of the test publisher or sponsor on all test materials. This means that the test taker will not reproduce the items without authorization nor disseminate, in any form, material that is clearly analogous to the reproduction of the items. Test takers, as well as test administrators, have the responsibility not to compromise security by divulging any details of the test items to others nor may they request such details from others. Failure to honor these responsibilities may compromise the validity of test score interpretations for themselves and for others.

Sometimes, testing programs use special scores, statistical indicators, and other indirect information about irregularities in testing to help ensure that the test scores are obtained fairly. Unusual patterns of responses, large changes in test scores upon retesting, speed of responding, and similar indicators may trigger careful scrutiny of certain testing protocols. The details of these procedures are generally kept secure to avoid compromising their use. However, test takers can be made aware that in special circumstances, such as response or test score anomalies, their test responses may get special scrutiny. If evidence of impropriety or fraud so warrants, the test taker's score may be canceled, or other action taken.

Because these *Standards* are directed to test providers, and not to test takers, standards about test-taker responsibilities are phrased in terms of providing information to test takers about their rights and responsibilities. Providing this information is the joint responsibility of the test developer, the test administrator, the test proctor, if any, and the test user and may be apportioned according to particular circumstances.

Standard 8.1

Any information about test content and purposes that is available to any test taker prior to testing should be available to *all* test takers. Important information should be available free of charge and in accessible formats.

Comment: The intent of this standard is equal treatment for all. Important information would include that necessary for testing, such as when and where the test is given, what material should be brought, the purpose of the test, and so forth. More detailed information, such as practice materials, is sometimes offered for a fee. Such offerings should be made to all test takers.

Standard 8.2

Where appropriate, test takers should be provided, in advance, as much information about the test, the testing process, the intended test use, test scoring criteria, testing policy, and confidentiality protection as is consistent with obtaining valid responses.

Comment: Where appropriate, test takers should be informed, possibly by a test bulletin or similar procedure, about test content, including subject area, topics covered, and item formats. They should be informed about the advisability of omitting responses. They should be aware of any imposed time limits, so that they can manage their time appropriately. General advice should be given about test-taking strategy. In computer administrations, they should be told about any provisions for review of items they have previously answered or omitted. Test takers should understand the intended use of test scores and the confidentiality of test results. They should be advised whether they will have access to their results. They should be informed about the policy con-

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cerning taking the test again and about the possibility that some test protocols may receive special scrutiny for security reasons. Test takers should be informed about the consequences of misconduct or improper behavior, such as cheating, that could result in their being prohibited from completing the test, receiving test scores, or other sanctions.

Standard 8.3

When the test taker is offered a choice of test format, information about the characteristics of each format should be provided.

Comment: Test takers sometimes have to choose between a paper-and-pencil administration and a computer-administered test, which may be adaptive. Some tests are offered in several different languages. Sometimes an alternative assessment is offered in lieu of the ordinary test. Test takers need to know the characteristics of each alternative so that they can make an informed choice.

Standard 8.4

Informed consent should be obtained from test takers, or their legal representatives when appropriate, before testing is done except (a) when testing without consent is mandated by law or governmental regulation, (b) when testing is conducted as a regular part of school activities, or (c) when consent is clearly implied.

Comment: Informed consent implies that the test takers or representatives are made aware, in language that they can understand, of the reasons for testing, the type of tests to be used, the intended use, and the range of material consequences of the intended use. If written, video, or audio records are made of the testing session, or other records are kept, test takers

are entitled to know what testing information will be released and to whom. Consent is not required when testing is legally mandated, such as a court-ordered psychological assessment, but there may be legal requirements for providing information. When testing is required for employment or for educational admissions, applicants, by applying, have implicitly given consent to the testing. Nevertheless, test takers and/or their legal representatives should be given appropriate information about a test when it is in their interest to be informed. Young test takers should receive an explanation of the reasons for testing. Even a child as young as two or three, as well as older test takers of limited cognitive ability, can understand a simple explanation as to why they are being tested (such as, "I'm going to ask you to try to do some things so that I can see what you know how to do and what things you could use some more help with").

Standard 8.5

Test results identified by the names of individual test takers, or by other personally identifying information, should be released only to persons with a legitimate, professional interest in the test taker or who are covered by the informed consent of the test taker or a legal representative, unless otherwise required by law.

Comment: Scores of individuals identified by name, or by some other means by which a person can be readily identified, such as social security number, should be kept confidential. In some situations, information may be provided on a confidential basis to other practitioners with a legitimate interest in the particular case, consistent with legal and ethical considerations. Information may be provided to researchers if a test taker's anonymity is maintained and the

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intended use is consistent with accepted research practice and is not inconsistent with the conditions of the test taker's informed consent.

Standard 8.6

Test data maintained in data files should be adequately protected from improper disclosure. Use of facsimile transmission, computer networks, data banks, and other electronic data processing or transmittal systems should be restricted to situations in which confidentiality can be reasonably assured.

Comment: When facsimile or computer communication is used to transmit a test protocol to another site for scoring, or if scores are similarly transmitted, special provisions should be made to keep the information confidential. See Standard 5.13.

Standard 8.7

Test takers should be made aware that having someone else take the test for them, disclosing confidential test material, or any other form of cheating is inappropriate and that such behavior may result in sanctions.

Comment: Although the standards cannot regulate the behavior of test takers, test takers should be made aware of their personal and legal responsibilities. Arranging for someone else to impersonate the nominal test taker constitutes fraud. Disclosure of confidential testing material for the purpose of giving other test takers pre-knowledge is unfair and may constitute copyright infringement. In licensure and certification tests, such actions may compromise public health and safety. The validity of test score interpretations is compromised by inappropriate test disclosure.

Standard 8.8

When score reporting includes assigning individuals to categories, the categories should be chosen carefully and described precisely. The least stigmatizing labels, consistent with accurate representation, should always be assigned.

Comment: When labels are associated with test results, care should be taken to be precise in the meanings associated with the labels and to avoid unnecessarily stigmatizing consequences associated with a label. For example, in an assessment designed to aid in determining whether an individual is competent to stand trial, the label "incompetent" is appropriate for individuals who perform poorly on the assessment. However, in a test of basic literacy skills, it is more appropriate to use a label such as "not proficient" rather than "incompetent," because the latter term has a more global and derogatory meaning.

Standard 8.9

When test scores are used to make decisions about a test taker or to make recommendations to a test taker or a third party, the test taker or the legal representative is entitled to obtain a copy of any report of test scores or test interpretation, unless that right has been waived or is prohibited by law or court order.

Comment: In some cases a test taker may be adequately informed when the test report is given to an appropriate third party (treating psychologist or psychiatrist) who can interpret the findings to the test taker. In professional applications of individualized testing, when the test taker is given a copy of the test report, the examiner or a knowledgeable third party should be available to interpret it, even if it is clearly written, as the test

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taker may misunderstand or raise questions not specifically answered in the report. In employment testing situations, where test results are used solely for the purpose of aiding selection decisions, waivers of access are often a condition of employment, although access to test information may often be appropriately required in other circumstances.

Standard 8.10

In educational testing programs and in licensing and certification applications, when an individual score report is expected to be delayed beyond a brief investigative period, because of possible irregularities such as suspected misconduct, the test taker should be notified, the reason given, and reasonable efforts made to expedite review and to protect the interests of the test taker. The test taker should be notified of the disposition, when the investigation is closed.

Standard 8.11

In educational testing programs and in licensing and certification applications, when it is deemed necessary to cancel or withhold a test taker's score because of possible testing irregularities, including suspected misconduct, the type of evidence and procedures to be used to investigate the irregularity should be explained to all test takers whose scores are directly affected by the decision. Test takers should be given a timely opportunity to provide evidence that the score should not be canceled or withheld. Evidence considered in deciding upon the final action should be made available to the test taker on request.

Comment: Any form of cheating or behavior that reduces the validity and fairness of test results should be investigated promptly, and

appropriate action taken. Withholding or canceling a test score may arise because of suspected misconduct by the test taker, or because of some anomaly involving others, such as theft, or administrative mishap. An avenue of appeal should be available and made known to candidates whose scores may be amended or withheld. Some testing organizations offer the option of a prompt and free retest or arbitration of disputes.

Standard 8.12

In educational testing programs and in licensing and certification applications, when testing irregularities are suspected, reasonably available information bearing directly on the assessment should be considered, consistent with the need to protect the privacy of test takers.

Comment: Unless allegations of misconduct are made by associates of the test taker, the information to be collected would ordinarily be limited to that obtainable without invading the privacy of the test taker or his/her associates.

Standard 8.13

In educational testing programs and in licensing and certification applications, test takers are entitled to fair consideration and reasonable process, as appropriate to the particular circumstances, in resolving disputes about testing. Test takers are entitled to be informed of any available means of recourse.

Comment: When a test taker's score may be questioned and may be invalidated, or when a test taker seeks a review or revision of his/her score or some other aspect of the testing, scoring, or reporting process, the test taker is entitled to some orderly process for effective input into or review of the

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decision making of the test administrator or test user. Depending upon the magnitude of the consequences associated with the test, this can range from an internal review of all relevant data by a test administrator, to an informal conversation with an examinee, to a full administrative hearing. The greater the consequences, the greater the extent of procedural protections that should be made available. Test takers should also be made aware of procedures for recourse, fees, expected time for resolution, and any possible consequences for the test taker. Some testing programs advise that the test taker may be represented by an attorney, although possibly at the test taker's expense.